

FINANCIAL TIMES

UK unemployment: an alternative to the dole queue, Page 14

EUROPE'S BUSINESS NEWSPAPER

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Monday December 3 1984

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Algeria	120	Indonesia	1,700	Portugal	140
Australia	1,200	Japan	1,700	S. Arabia	100
Belgium	1,200	South Africa	1,700	Singapore	100
Canada	1,200	Spain	1,700	Taiwan	100
France	1,200	Switzerland	1,700	Thailand	100
Germany	1,200	U.K.	1,700	U.S.A.	1,700
Italy	1,200				
Netherlands	1,200				
Denmark	1,200				
Spain	1,200				
Sweden	1,200				
U.K.	1,200				
U.S.A.	1,200				

NEWS SUMMARY

GENERAL

Move on British miners' assets

Renewed efforts to seize financial control of Britain's National Union of Mineworkers today by the official receiver appointed by the High Court in London to take over the financial running of the union.

Mr Herbert Brewer, the receiver, flew to Luxembourg as the NUM executive met in London following the court's rejection of the union's appeal against his appointment.

The signs were that the executive of the NUM was deeply divided over whether to continue its defiance of court orders made as a result of action brought by working miners. Page 16; Background, Page 8

Sri Lanka 'invasion'

The Indian Government reacted angrily to allegations by the Sri Lanka Minister of National Security that Tamil militants had mounted an armed invasion on northern parts of the island from bases in south India. There were reports of fierce fighting between Tamil militants and Sri Lanka soldiers. Page 3

Salvador breakdown

El Salvador's peace process appears to have broken down before negotiations have even started, following President José Napoleón Duarte's categorical rejection of left-wing rebel proposals to end the five-year-old civil war. Page 2

Zia referendum

Pakistani military ruler Mohammad Zia-ul-Haq has effectively reappointed himself president by calling a snap referendum on his Islamic policies that will give him a five-year mandate when it is passed. Page 3

Singapore elections

Singapore will hold general elections on December 22. New candidates for the ruling People's Action Party include Brigadier-General Lee Hsien Loong, son of Premier Lee Kuan Yew. Page 3

Border shooting

Hours after West Germany praised East Germany for dismantling the last of 35,000 automatic sharpshooters on the border, East German border guards fired at least 20 shots at a would-be escapee, apparently killing him.

Self-rule plans

France sent Edgard Pisani, a European Community High Commissioner, to New Caledonia as its special representative to draw up plans for self-rule for the troubled South Pacific territory. Page 2

Anti-Nato protest

Some 25,000 people formed a human chain in Madrid to protest against Spain's withdrawal from Nato and the removal of U.S. military bases.

Hussein call

King Hussein of Jordan made a spirited call for joint Arab action on the Middle East peace and said that the Palestine Liberation Organisation must be included in any peace talks.

Poles jump ship

Another 51 Poles jumped ship, from the Szczecin ferry to West German port Travemünde, making a total of nearly 500 refugees in two weeks.

Swiss media vote

Swiss voters approved two government proposed amendments to define the role of the electronic media and to improve help for victims of violent crime.

Dalai Lama's visit

Tibet's exiled spiritual leader the Dalai Lama has agreed to make a return visit and to talk with senior Chinese leaders.

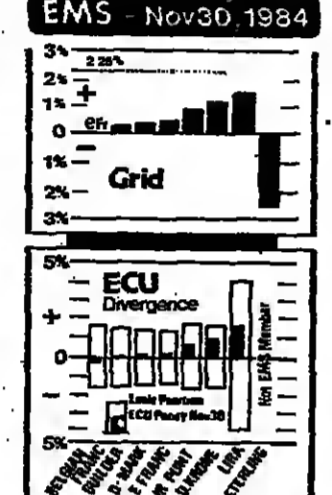
BUSINESS

Case and IH deal may take 3 years

CONSOLIDATION of the European firm equipment operations of J. I. Case and International Harvester could take up to three years to complete. Page 16

RENEWED dollar strength depressed the D-Mark within the European Monetary System last week and enabled weaker currencies to show a small improvement. The D-Mark fell to a nine-month low against the French franc, partly reflecting the D-Mark's weakness against the dollar and also showing some short-term speculation in order to exploit interest rate differentials. Other member currencies traded quietly and with the West German Bundesbank leaving its key lending rates unchanged, there seemed little chance of other EMS members cutting interest rates.

The chart shows the two constraints on European Monetary System exchange rates. The upper grid, based on the weakest currency in the system, defines the cross rates from which no currency (except the lira) may move more than 2% per cent. The lower chart gives each currency's divergence from its "central rate" against the European Currency Unit (ECU), itself a basket of European currencies.



EUROBOND: Market opens officially to non-Japanese corporate borrowers and government agencies today, after frenzied activity last week in the bond market and certificate of deposit market, alike liberalised from this week. Page 17

WORLD OIL stocks are likely to be run down by 1.4m barrels a day outside the communist bloc, the International Energy Agency said. Page 4

TOKYO Blue chips were hit by Wall Street's decline, but other advances pushed the Nikkei Dow index up by 6.80 to a record 11,437.70 in busy trading on Saturday. Prices, Page 2

BRAZILIAN FUTURES Market opened in Rio de Janeiro and will trade initially only in gold futures. Page 2

EUROPROGRAMME L1,000bn (\$25.7m) property fund controlled by Italian financier Orazio Bagagnasco, may have to be liquidated next spring. Page 16

NEUE HEIMAT, troubled West German property group, is to be restructured, mainly to help its NHS subsidiary, which could lose DM 100m (\$32.5m) this year. Page 19

GENERAL MOTORS of the U.S. is entering a \$100m joint production venture with Mexico's state-owned bus and lorry maker Dina. Page 4

CONTINENTAL ILLINOIS: Federal Deposit Insurance Corporation, which rescued the Chicago bank this year, is dismissing more than half of its board. Page 19

JOHNSON GROUP Cleaners is going to make £8.1m (\$7.5m) profit before tax in 1984 (£6.2m) and expects a 37 per cent rise in the next half. Page 20

CHARLES FULTON and Cantor Fitzgerald Securities of New York are to act as joint brokers for U.S. Government securities in London from February. Page 9

European companies to meet on Japan, U.S. biotech threat

CHAIRMEN from Europe's major chemical, pharmaceutical and food companies are to meet this month to discuss the growing threat to European biotechnology from Japan and the U.S.

The meeting, in Brussels, on December 12, has been called by Viscount Etienne Davignon, the EEC Industry Minister. He used the same tactic to attract top-level industrial interest in the Community's €850m Esprit programme of pre-competitive research support for European electronics.

About 19 company chairmen are being invited personally by Viscount Davignon, including those of Bayer and Hoechst in West Germany, Elf-Aquitaine and Rhone-Poulenc in France, Alko-Pharma and Gist-Brocardes in the Netherlands, Montedison in Italy, Novo in Denmark, and Glaxo and Unilever in the UK.

Britain has been asked to chair the meeting.

Mr John Harvey-Jones, chairman of ICI, the UK group, has agreed to chair the biotechnology meeting, which takes place just one week before a proposal for EEC support for biotechnology is put to the Council of Ministers, on December 19.

ICI, with a large production and development centre for biotechnology in the UK, is probably Europe's strongest biotechnology company.

To initiate Esprit (the European Strategic Programme of Research in Information Technology) Viscount Davignon first brought together the chairmen of Europe's 12 top electronics companies, which

with Italy accepting some means of curbing wine production by forcing excess output to be distilled at very low prices.

The key is to find acceptable means of triggering that compulsory distillation.

If the wine issue can be resolved, at least in outline, then fisheries and trade in fruit and vegetables, the other outstanding points in the enlargement discussions, are likely to fall swiftly into place.

It is the failure among the Ten to agree on their own position on the issues that has delayed the negotiations with Spain and Portugal. That also threatens to push the whole enlargement process back, in which case the projected date of entry, January 1 1986, would be impossible to meet.

Even if they agree among themselves, the terms may be so strict as to be quite unpalatable to the applicants.

The enlargement deadlock has been forced on to the summit agenda because of the failure of the 10 foreign ministers last week to make any progress over three days.

Enlargement seems certain to dominate the agenda at the expense of the broad strategic questions the heads of government had hoped to debate - the future development of the Community and its institutions, and how to improve coordination of economic policies, particularly to tackle unemployment.

In addition, they have still to resolve the issue of budget discipline, involving the long-term control of Community spending, which is caught up in a dispute over how to involve the European Parliament.

If that is not finalised, Britain and West Germany have threatened not to contribute extra cash this year, to tide the Community over a Ecu 1bn (\$714m) spending gap.

The impasse, Page 15

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Wine lake problem key to deal on EEC expansion

BY QUENTIN PEEL IN BRUSSELS

THE TEN heads of state and government of the European Community meet in Dublin today with just an outside chance of reaching agreement on terms for the future membership of Spain and Portugal.

The key to the summit's success is the question of how to control the huge overproduction of wine in the Community, before Spain, in particular, brings a further flood to add to the existing wine lake.

Dr Garrett FitzGerald, the Irish Prime Minister and president of the European Council, has spent the past few days in hectic consultations with his fellow government

leaders to unblock the talks and save his summit from ignominious failure.

His efforts have included a dash to Paris and Rome for talks with President Francois Mitterrand and Sig Bettino Craxi, the Italian Prime Minister, to seek the basis for a compromise agreement that might revive the enlargement talks and enable them to be resolved by the end of the year.

Irish officials said he had received no new indications as to whether a new wine policy would emerge from today's meeting, but Brussels officials believe there is an outside possibility of agreement,

with Italy accepting some means of curbing wine production by forcing excess output to be distilled at very low prices.

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The impasse, Page 15

Big investors rebuffed as BT share offer 4 times oversubscribed

BY ALISON HOGAN IN LONDON

ONLY the smallest investors are to have their applications for shares in newly privatised British Telecom (BT) met in full. Wealthy individuals who applied for large tranches in the £3.9bn (\$4.8bn) sale are to receive no shares at all.

The UK component of the offer was four times oversubscribed, producing applications worth £18.75bn for 12.75bn shares. A total of only 3bn shares were for sale, of which 415m have gone to investors in the U.S., Canada and Japan.

The partly paid shares were priced at 130p, with 50p payable upon application.

BT will start life in the private sector with about 3.2m shareholders. The UK Government, in accordance with its policy to broaden share ownership, has met in full the applications of over 1m people who applied for between 200 and 400 shares, the minimum amounts. A further 1m investors who applied for up to 100,000 shares will receive only 800 shares. The 7,500 applications for over 100,000 shares have been turned down completely.

The larger investors are thought mainly to be wealthy individuals, although there may also have been some applications from institutions, hoping to top up the 1.42bn shares, or 47.4 per cent of the offer, which they had already secured through

an earlier placing by the Government.

Investors who applied for 800 shares will receive 500; applicants for 1,200 will receive 600 shares and those who applied for between 1,600 and 100,000 shares will receive 800 shares each.

Individual share allocations are being dealt with on a similar basis worldwide.

About two out of every three successful investors opted for the incentive of eventual bonus shares, rather than £18 vouchers towards telephone bills. That might indicate that they intend to remain long-term holders of the shares.

Stockbrokers and jobbers expect early trading in the shares (which starts at 3pm today) to be volatile, with many disappointed investors seeking to buy more shares, but few people wanting to sell. The partly-paid shares of 50p could reach a premium as high as 35p.

The jobbers, who make a price in the shares, say that BT will be one of the most difficult shares to price, since the level of selling is so hard to predict.

UK investors will not receive their letters of acceptance until next week - they are being posted on Monday, December 10 - and may hold back selling until then.

The jobbers are looking overseas for their main supply of stock.

Argentina close to agreement on debt package

BY PETER MONTAGNON, EUROMARKETS CORRESPONDENT, IN LONDON

ARGENTINA was close to an agreement with its leading commercial bank creditors last night on a \$20bn package designed to help restore orderly servicing of its \$45bn foreign debt.

However, hopes that the package, which is to include a new \$4.2bn loan as well as the rescheduling of \$18bn in public and private-sector debt, could have been launched before the deadline set by the banks for the end of November were dashed as talks continued in New York throughout the weekend.

One banker close to the negotiations said last night: "The outstanding points are just details, however. I don't think there are any major obstacles left."



Mr Paul Volcker

The agreement, which will reschedule debt due as far back as 1982, was expected to be one of the most complicated rescheduling deals ever and needed meticulous preparation, bankers said.

Senior bankers, who had previously resisted offering Argentina a credit as last year's \$4.2bn, have also been worried that the package might meet a hostile reception from a banking community that has grown increasingly resentful of Argentine interest arrears now stretching back to last May. Most of Argentina's foreign debt was recently declared sub-standard by U.S. government agencies responsible for supervising the banking system.

Top U.S. officials including Mr Donald Regan, Treasury Secretary, and Mr Paul Volcker, Chairman of the Federal Reserve Board, have now put their weight behind a speedy solution to Argentina's debt, however. This is expected to be symbolised in a \$500m U.S. Treasury bridging loan accompanying the debt package.

Leading creditor banks are also keen to resolve Argentina's problems before their own year-end balance sheet and profit reporting deadlines. They believe that a solution for Argentina would improve the climate for other debt negotiations, particularly those they still face with Brazil, whose government is to change in the spring.

Argentina's debt package hinges on an economic stabilisation programme agreed with the International Monetary Fund last September.

Mr Jacques de Larosiere, IMF Managing Director, has told bank creditors, however, that his board will not release a \$1.4bn credit from the IMF until the bank package is well on the road to completion.

In the two years since the debt crisis arose, Argentina has established a tradition of brinkmanship in negotiating with its creditors. Talks have also frequently been complicated by bilateral friction between Argentina and the British banking community after the Falklands war.

Capital markets, Section II

European companies to meet on Japan, U.S. biotech threat

BY DAVID FISHLICK, SCIENCE EDITOR, IN LONDON

CHAIRMEN from Europe's major chemical, pharmaceutical and food companies are to meet this month to discuss the growing threat to European biotechnology from Japan and the U.S.

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Viscount Davignon: chairmen for talks

technology to be "the last major technological revolution of this century."

In 1981, the Japanese Government launched a 10-year plan for biotechnology, focusing on the next generation of industrial biotechnologies, and committing more than \$100m to the support of strategic research, mostly by companies.

Participating companies also enjoy generous tax advantages, such as a 100 per cent depreciation reduction, on all fixed assets associated with the national research programme.

EEC officials say they are also worried about the scale of U.S. investment in biotechnology. One estimate suggests that U.S. industry will have invested more than \$2bn in biotechnology research this year.

More than 200 new biotechnology firms with close links with U.S. universities and national laboratories have been launched in the past five years.

Two new U.S. biotechnology trade associations, representing both the new biotechnology firms and established chemical and drug companies have been recruiting European companies in an effort to strengthen the U.S. position in relation to Japan.

Some European companies - notably Hoechst - have made a substantial long-term biotechnology research investment in the U.S.

The first meeting on biotechnology is expected to focus less on joint research between participating companies than on the major commercial handicaps to European industry.

The Japanese have declared bio-

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OVERSEAS NEWS

Regan hits out at Wall St over tax plan

By Reginald Dale, U.S. Editor, in Washington

MR DONALD REGAN, the U.S. Treasury Secretary, yesterday said he was confident that he could win President Ronald Reagan's support for his controversial plan to simplify the American tax system, unveiled last week.

He sharply criticised his former colleagues on Wall Street as "silly" for complaining about the plan before they knew its full details.

Mr Regan said that the second, more detailed volume of the plan, which would shift part of the tax burden from individuals to large sectors of big business, would be published today. Wall Street was "hip-shooting as usual" without having read part two, he said.

In an interview with ABC television, Mr Regan also said defence spending would have to be "part of the package" of spending cuts on which Mr Regan is to resume work today—despite vehement opposition from Mr Caspar Weinberger, the Defence Secretary. He stressed, however, that the President had made no final decision on defence cuts and would not consider them until he had looked at cutbacks or freezes in all the other programmes under review.

Mr Regan said that reducing the budget deficit through spending cuts would have to come first but he hoped the spending cuts and tax simplification could proceed at the same time on "two tracks".

Mr Dan Rostenkowski, Democratic chairman of the House ways and means committee which is responsible for initiating tax legislation, said Mr Regan's tax plan was "a giant step in the right direction."

Duarte rejects rebel peace plan

BY DAVID GARDNER IN MEXICO CITY

EL SALVADOR'S peace process, begun with such fanfare and hope last month, appears to have broken down before negotiations have even started, following President Jose Napoleon Duarte's categorical rejection of left-wing rebel proposals to end the five-year-old civil war.

Minutes after the second round of talks between Government representatives and insurgent leaders finished late on Friday, Sr Duarte went on television to turn down the rebel proposals as "unconstitutional".

The insurgent plan called for a phased move towards a power-sharing Government and national consensus, with some form of integration of guerrilla forces with a regular army purged of the extreme Right, followed by new elections open to all.

This plan largely bypasses the existing constitution, which the guerrillas want to see

reformed by referendum. The constitution was drafted by the extreme Right-dominated constituent assembly elected in the controversial 1982 election.

At a Press conference on Saturday, Sr Duarte described the rebels' posture as intransigent and insolent, saying they were only interested in dialogue for tactical reasons. At the same time, he made clear his own peace proposal, presented to rebel leaders at last month's meeting in the guerrilla stronghold of La Palma, was not negotiable.

Sr Duarte's peace offer calls on the rebels to lay down their arms and agree to take part in the electoral process, after which they would be amnestied. The Government, Sr Duarte said, would guarantee the left physical security and the right to organise.

The rebels took no part in either the 1982 election or the

poll which this year brought Sr Duarte's Christian Democrats to power, claiming that democratic elections are not possible in a country dominated by a reactionary, land-owning oligarchy, backed by an extreme right-wing army equipped and financed by the U.S.

President Duarte repeated at the weekend remarks he made when he launched his peace initiative, that he would "not stray one millimetre from the constitution. He said: "If I were to step outside the constitution I would cease to be President."

He denied that the army was setting the limits to his peace effort, saying that he was bound only by the limits of the constitution.

The 12 hours of talks on Friday saw both sides barricade themselves into irreconcilable positions. Instead of the hoped-for Christmas ceasefire, the

guerrillas have agreed to allow the free passage of all vehicles for 13 days from December 22. Sr Duarte claims the rebels refused to consider the government offer of a ceasefire. The rebels, who say their ceasefire proposal in La Palma was rejected, argue that the government was this time seeking a unilateral ceasefire from the guerrillas.

Although the joint communiqué from Friday's talks commits both sides to continuing the dialogue, no date for a new meeting was set.

The far right was yesterday jubilant at the outcome of the talks. Major Roberto D'Aubuisson, the far Right leader widely connected to the death squads, said Friday's broadcast by Sr Duarte and his delegation could easily have been made by his own Arzua Party, provided "you blackened out the picture."

Pisani sent to New Caledonia

BY PAUL BETTS IN PARIS

THE FRENCH Government dispatched M Edgar Pisani, the European Community commissioner and former Gaullist minister, to New Caledonia yesterday to try to put an end to the growing violence in the French Pacific territory.

M Pisani will also attempt to negotiate a peaceful and lasting settlement between white loyalists and black Melanesian separatists.

But as the Socialist Administration sought to defuse the crisis, it faced a fresh wave of separatist violence on the Mediterranean island of Corsica.

A French CRS riot police officer was killed and two others seriously wounded by separatists at Bastia early yesterday. Violent clashes also erupted between separatists and police on Saturday night at Ajaccio,

the Corsican capital. M Pisani is a minister of agriculture under General de Gaulle who subsequently joined the Socialist Party, was appointed High Commissioner of New Caledonia with full emergency powers after a special Cabinet meeting on Saturday evening.

M Pisani has been given two months to find a solution to the increasingly bitter conflict which is having serious political repercussions at home for President Mitterrand.

M Laurent Fabius, the Socialist Prime Minister, said at the weekend that the French Government intended to restore order on the island and the wounding of several loyalists and separatists in clashes have increased tensions. The Government has dispatched 1,500 gendarmes to the territory.

self-determination on the Pacific islands and hold a referendum in New Caledonia on the issue of independence before the 1986 French legislative elections.

M Pisani's essential task will be to prepare the ground rule: for such a referendum which satisfies both loyalists and separatists.

Although the situation on the territory remains tense, both loyalist and separatist camps welcomed the appointment of M Pisani.

His immediate task, however, will be to try to restore order. The death of a white resident and the wounding of several loyalists and separatists in clashes have increased tensions. The Government has dispatched 1,500 gendarmes to the territory.

Hussein in plea for Arab unity

By Tony Walker in Cairo

KING HUSSEIN of Jordan, making a spirited call for joint Arab action on Middle East peace, insisted yesterday that the Palestine Liberation Organisation must be included in any peace talks.

The king, in an address to Egypt's Parliament in which he criticised the Camp David records of 1978 between Egypt and Israel, said Jordan could not replace the PLO as a representative of the Palestinian people.

King Hussein said Jordan had rejected the Camp David records "from the start" because they had not dealt with the questions of the Israeli occupied West Bank and Gaza Strip and had excluded the PLO as representatives of the Palestinians.

The king appeared to be specifically answering suggestions that Jordan act as the representative of the PLO in possible talks with the Israelis. Israel has steadfastly maintained that it will not deal with the PLO which it describes as a "terrorist organisation."

King Hussein said in a brief visit to Egypt for talks with President Mubarak, the Egyptian leader. His visit follows Jordan's announcement on September 25 that it was restoring relations with Egypt after a five-year break.

Egypt and Jordan are making no secret of their interest in encouraging a renewed Middle East peace drive with the direct participation of the PLO under the leadership of Mr Yasser Arafat.

In Amman last week, the Palestine National Council, the Palestinians' Parliament-in-exile, authorised Mr Arafat to explore with Jordan a possible joint initiative towards peace in the Middle East.

King Hussein wants negotiations on a possible Palestinian "homeland" on the West Bank to take place under the auspices of the United Nations.

Irish Central Bank in bid to minimise effect of strike

BY BRENDAN KEENAN IN DUBLIN

MANAGERS in the Irish Central Bank, where over 300 staff are due to go on strike today, will concentrate on maintaining the value of the Irish pound in foreign exchange markets while the strike lasts.

The main effect of the strike on the public is likely to be a shortage of notes in circulation for Christmas. Normally, the amount of currency is increased by up to 10 per cent at this time of year and shoppers are being urged to use cheques and credit cards where possible.

The strike at the bank begins as Irish interest rates will go up by 2 per cent from the close of business today. The rise, against international trends, has been forced by heavy Government borrowing on the domestic market, as the Exchequer tries to keep foreign horrowers at bay.

There are fears that the gilts market where the Government

is expected to remain active to the end of the year. It is due to raise over £1bn in the market this year, much of it in the last quarter. The bank acts as registrar of gilts.

One effect will be that owners of gilts will not receive dividends as they fall due but officials believe an effective market can be maintained.

The rise in interest rates brings the ordinary overdraft rate to 17.25 per cent. Rates for deposits under £25,000 are going up by only 1 per cent which should minimise the effect of mortgage rates.

The Department of Finance is making arrangements to ensure that foreign debt repayments are made as they fall due, a function normally carried out by the bank.

The striking workers, who are members of ASTMS, are seeking a 15 per cent pay rise but the bank has offered an increase within Government guidelines—no pay rise this year and 3 per cent next year.

Moderates favoured for Grenada poll

By Canute James in St George's

THE New National Party (NPP), a moderate coalition supported by the U.S. and several eastern Caribbean governments is favoured to win today's general election in Grenada.

Opinion polls indicate the NPP could win nine of the 15 seats, with others going to the Grenada United Labour Party or Sir Eric Gairy, the controversial former Prime Minister.

The Maurice Bishop Patriotic Movement is not expected to fare well. It is the remnant of the Socialist Party of Mr Maurice Bishop, murdered in last year's coup which sparked off the invasion by forces of the U.S. and contingents from Caribbean governments. The Christian Democratic Labour Party has already counted itself out, saying it wants to form the opposition.

Security has been strengthened for today's poll, for which 47,000 voters are eligible. Some 150 constables from neighbouring islands, mostly from Barbados, have joined the 250 U.S. troops and 450 Caribbean troops and police already on the island.

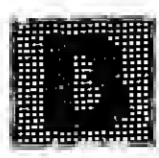
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Copy of the annual report ended March 31, 1984 of the Company is now available and may be obtained from the Company's head office at: Marunouchi 2-chome, Chiyoda-ku, Tokyo 100, Japan. Attn: Finance & Money Market Team, Finance Dept. A (A.F.B.)

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OVERSEAS NEWS

Sri Lanka extends curfew to curb violence

By Mervyn de Silva in Colombo and K. K. Sharma in New Delhi

THE SRI LANKA Government yesterday extended the curfew in the northern part of the island following the escalation of fighting between its security forces and Tamil separatist guerrillas.

Mr Wickrema Weerasooriya, a Government official, however, corrected earlier reports that 57 people had been killed Saturday morning in attacks by guerrillas—allegedly based in Madras, India—on two fishing villages, Nyaru and Kokkila. He said 11 had been killed and 13 injured.

The attack on the fishing villages followed Friday's massacre of 85 rehabilitated prisoners working as settler farmers on two agricultural projects. The Sinhalese army claimed it had killed over 80 rebels and arrested 30 suspects in a counter-attack.

On Saturday night, the Government reported yesterday, Tamil rebels made another attempt to land near Mannar on the north-eastern coast. The navy destroyed six out of eight boats, the Government claimed.

A curfew lasting from 5 pm to 6 pm was imposed on five north-western towns which have only a small Tamil population. The fishermen who died in the raids of Nyaru and Kokkila are thought to have had families in these towns and the Government may have feared reprisals.

Security measures announced last week included declaration of the entire northern coastline as a "prohibited area" to all boats. In addition, the Jaffna peninsula was declared a "security zone." Movement to and from the zone has been restricted to those with special permits.

The Indian Government reacted angrily to allegations by Mr Lalith Abulathudail, the Sri Lanka Minister of National Security, that Tamil militants had mounted an armed "invasion" of the northern parts of the island from bases in South India.

The Indian External Affairs Ministry said the allegations were "totally without basis and we are shocked that a war psychosis is being built up. There is no question of invasion from any part of India."

**Michael Thompson-Noel looks at Labor's prospects after its setback at the polls
Hawke the victor, but with clipped wings**

His wings clipped by a mix-up over voting procedures, Mr Bob Hawke, the Australian Prime Minister, seemed chastened and grave yesterday following a general election win on Saturday in which his Labor Government resped a far smaller majority than generally anticipated.

The damage to Mr Hawke's prestige was reflected in a comment at 5.51 pm on Saturday night—less than three hours after the polling booths closed—by Mr Bill Hayden, the man Mr Hawke deposed as Labor leader in February 1983, who now serves as Foreign Minister. Mr Hayden has an impish sense of timing. Speaking of Mr Hawke, he said: "The driver's dog is going to win again, but he looks a bit clipped out this time. We've been taught a lesson, something's gone wrong. We'd better find the reason for it."

Mr Hayden was commenting on the confusion caused by changes in Australia's already complicated ballot system, which led to a record number of disqualified votes—many of them Labor's—that helped cost Mr Hawke the near-landslide win Labor had expected.

Instead of a majority of about 40 seats in the enlarged, 148-seat House of Representatives, Mr Hawke's majority will be around 16.

At once, Labor's opponents were celebrating Mr Hawke's damaged credibility. Mr Andrew Peacock, whose authority as Liberal Party leader was enhanced by the campaign, said he would win the next election. His coalition partner, Mr Ian Sinclair, leader of the rural-based National Party, which gained more than 20 seats, was rather more brutal. "Anybody who kicks Bob Hawke in the pants should be happy," said Mr Sinclair.

In addition to the mix-up over voting papers, Mr Hawke is reckoned to have suffered for calling the election 15 months early, and for opting for a drawn-out, seven-week campaign.

His televised debate with Mr Peacock last Monday also cost him ground. Finally, it was claimed yesterday that arrogance and over-confidence on the campaign trail—plus a minor backlash over his pro-uranium policies—had hurt Mr Hawke.

Yesterday, Mr Hawke was greatly subdued, but insisted that his Government would "deliver the goods" over its new term. He says he will serve a full three years.

"Let's get it straight," said the Prime Minister. "We've won, and won with a comfortable working majority. Whatever the political embarrassment caused by the weekend's events, Mr Hawke's appeal as the non-partisan

architect of "national reconciliation" may be largely undamaged.

Labour will continue on its right-wing tack, and with its pay and prices accord with the trades unions, which forms the bedrock of its success with the economy to date.

Under Labor, which has ruled for just 20 months, inflation has been halved, employment boosted, business confidence restored, and industrial harmony restored.

Mr Hawke's challenge is to demonstrate that Labor's accord with the unions can be made to stick.

During the campaign, Labor pledged that over the next three years, Federal tax revenue and the Federal budget deficit would not rise as a proportion of Gross Domestic Product, and that Government expenditure growth would not exceed the growth rate of the economy, which is expected to be a little

over 4 per cent in 1984-85.

Mr Hawke also vowed to chop back excess business legislation and regulation, to strengthen manufacturing industry, to overhaul the tax system, and to raise education and health standards.

In regional terms, Mr Hawke will seek to build on good relations with Japan, the U.S., and China, and to encourage much stronger ties with the Asean bloc, which despite its proximity takes less than 3 per cent of Australia's imports from Australia.

At the start of his campaign, Mr Hawke claimed that Australia had acquired a new self-confidence and self-respect. Mr Hawke's own self-confidence will have been damaged by the election's outcome, and Labor's honeymoon is undoubtedly over. But the initiative remains with Mr Hawke. His ambition of winning the next election and ruling until 1990 may well be realised.

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Zia offers himself for re-election in referendum

BY MOHAMMAD AFTAB IN ISLAMABAD

PAKISTAN'S President Gen Mohammed Zia ul Haq, in a surprise announcement over the weekend, offered himself to be re-elected for a five-year term after more than seven years of his rule. There will be no other candidate.

The unprecedented election will come through a referendum the first to be held on any issue in Pakistan since it gained independence from the British in 1947.

Parliamentary elections are once again pushed into the background, which may mean further political simmering in a nation where all political parties and activities are banned under martial law.

The referendum will link the vote to his programme of Islamising the society, economy, law and judicial system. Gen Zia said if the estimated 35m voters who will be eligible to participate in the referendum vote "yes" it would automatically mean that they had confidence in him, his policies, and his government.

The president has previously been elected through a referendum or a direct vote. The constitution provides for the election through a college compris-

Singapore sets date for poll

By Chris Sherwell in Singapore

MR LEE KUAN YEW, Prime Minister of Singapore for the past 25 years, will seek a seventh term as prime minister in a general election called yesterday for Saturday December 22.

The election, which has long been expected, is seen by Singapore ministers as a watershed: senior ministers are standing down and 26 new candidates are standing for the ruling People's Action Party, including Brig Gen Lee Hsien Loong, Mr Lee's elder son.

The result is not on doubt. But 20 to 25 per cent of the electorate routinely vote against the PAP and attention will focus on this percentage, following a number of controversial government measures taken over the past year.

A total of 75 seats will be contested, four more than in the 1980 election. Another three "non-constituency" seats will be allotted to the three best losers in the event of a PAP clean sweep. The ruling party holds all but one of the present 75 parliamentary seats.

The sole opposition MP is Mr Ben Jeyaratnam of the Workers Party, who won a by-election in 1981.

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Starting December 1st one of the advances in the growing internationalisation of the Japanese yen will be occurring in London when Yamaichi will be authorised to sell from its London office for the first time short-term negotiable Euroyen CDs.

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Treasury Bills and Gensaki. The CDs will be from all Japanese banks and other major banks worldwide; the interest rate will be based on the London Inter Bank Bid Rate which is at present considerably higher than the interest rate for notice deposits; and the instrument will be offered every day and at every maturity up to six months. Euroyen CDs will be of

particular interest to all those involved in the management of short-term funds as well as the temporary management of surplus funds.

To take advantage of this new deposit facility, please contact Yamaichi's Japanese yen desk and speak to Mr Kimura, Mr Egashira, Mr Kitajima, Mr Takata, Mr Hartley or Mr Simpson.

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ENERGY BLUEPRINT

More efficient lighting for retailers.

Displaying merchandise in the best possible light is an important part of the retailer's art.

The supermarket may use abundant light with the right colour characteristics to create an atmosphere conducive to impulse buying with glare controlled so that it does not become a distraction.

The boutique may opt for a limited amount of general lighting backed up by discrete areas of highlighting to give emphasis to particular lines.

In between these extremes come all the other establishments, from banks to butchers, all needing to appeal to the public and claim priority on the "shopping list". The need may be the fundamental one of trading when daylight is inadequate, or the more difficult one of defining a corporate image that will instantly register with the shopper. Whatever the ultimate aim, all these traders have one thing in common—they wish to use energy as effectively as possible, not just to minimise cost but to get the best return on their expenditure. A

new publication, "LIGHTING FOR RETAILERS", will help them do just that.

"LIGHTING FOR RETAILERS" explains, in simple terms, the fundamental aspects of vision that must be satisfied if customers are to be able to see quickly and accurately. It discusses the effects of contrast and colour on the appearance of goods and how these may be used to best advantage. It is, however, no use knowing what to achieve without knowing how to achieve it. So this new publication deals with the design of luminaires and the most widely used methods of optical control to direct light where it is wanted, without waste.

There is also a brief survey of commonly available light sources with indication of their colour characteristics and efficacy. Brief, because lamp development is proceeding at such a pace that it is almost impossible to present a comprehensive review without it being quickly out of date. Manufacturers should be consulted for the latest data.



The new Electricity Council booklet on energy efficient lighting for retailers.

Aimed at the person responsible for lighting decisions, be it either the owner-occupier or the specialist display staff, "LIGHTING FOR RETAILERS" is essential reading if lighting energy efficacy is to be maintained.

Tick box no. 1 for your copy

Efficient heating and comfortable cooling.

It was back to the drawing board for Hubbard Engineering Limited when their old oil-fired boiler proved too expensive and inefficient to run.

Their two-storey office building at Otley near Ipswich, had an inadequate heating system and, with no provision for cooling, the 488m² offices had an overheating problem in summer.

As engineers, Hubbards knew that an electric reverse cycle heat pump could cut running costs and improve heating efficiency. The capital cost of installing a heat pump

was slightly greater than that of a replacement for the oil-fired boiler system, but it had the major advantage of being able to heat and cool. The capital costs of an oil-fired system with additional cooling facilities would have been prohibitive.

They chose an easily-installed system which delivers hot water in winter and chilled water in summer through a two-pipe circuit to individual, thermostatically controlled fan coil units in the offices.

The running costs for this electric heat pump system are proving most economical. By changing to an

electric heat pump, Hubbard Engineering estimates it has cut 32% off their annual heating bill. Now it's not only the finance director who is delighted; all the other office staff are well satisfied, too, with a system that provides excellent heating in winter and comfortable cooling in summer. In fact this system has proved so successful that Hubbards are installing a second heat pump system in an extension of their offices.

For more information tick box no. 2.

PLANNED EFFICIENCY AND ECONOMY IN THE USE OF ELECTRICITY. 24

Why more and more businesses are warming to storage heating.

Electric storage heating has always had a reputation for safety, reliability, cleanliness, ease of installation and simplicity of operation.

The new generation of storage heaters, using low-cost, night-rate electricity, now offer businesses more control over running costs, too. Recent developments in automatic controls mean more efficiency and greater economy.

At the Loston House Hotel at Ilfracombe, for example, an outside weather sensor regulates the amount of heat stored in 20 slimline storage heaters. The need to adjust the heaters frequently by hand is eliminated and at the same time maximum economy in running costs is ensured. What is more, installing storage heaters entailed no structural interference at all to the hotel, a listed Georgian building. As in any hotel, heat stored during the night is needed right through to the next evening. This is possible because the damper arrangement of modern storage heaters is capable of holding back a proportion of the heat and releasing it later in the day. That is how they maintain even, comfortable temperatures throughout the 24 hours.

In shops and offices, where heat is needed over a shorter period, a more flexible system is available for storage heaters which can vary the pattern of heat output during day-time working hours.

Where quicker response is required Electricaire warm-air units can be installed. Such was the case with Jempons' Supermarket at Peasmarsh, East Sussex, a thriving family business that had undertaken an eight-year programme of phased expansion to treble the sales area of the store. Operation of the in-store Electricaire units is completely automatic. An outdoor weather sensor adjusts the amount of heat stored, which is then discharged during the day from each heater under individual



Loston House Hotel where storage heaters provide clean, reliable warmth.

thermostat control. With the heating load transferred to a low-cost overnight supply, the store's additional requirement for electric baking could be met without any increase in maximum demand.

Modern electric storage heating systems provide an energy-efficient solution to a wide range of heating needs, and their users agree they are unobtrusive, easy to install, and good to look at.

Yet the one benefit that has pleased users more than these has been the economic running costs provided by low-cost, night-rate

electricity. As John Ede, head of projects at ICI's Stowmarket factory, says about the warm air storage heating system installed in the company's new indoor bowling green: "Even in the coldest weather the heating maintains comfortable temperatures all the time the building is in use. And at the same time the running costs are very reasonable. In practice they have worked out even below the level originally projected by the Electricity Board."

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WORLD TRADE NEWS

Rundown of 1.4m b/d forecast in last quarter's oil stocks

BY RICHARD JOHNS

THE rundown of commercial oil stocks in the last quarter of this year worldwide (outside the Communist bloc) is likely to be about 1.4m barrels a day, according to preliminary estimates by the International Energy Agency.

The IEA argued that, following little or no change in the level during October, the rate for November was 1.5m b/d. That would imply a further reduction of up to 2.7m b/d in December.

Its calculations contrast with the figure of 3 to 4m b/d given by Sheikh Yamani, Saudi Minister of Oil, last week—evidently referring to the rate since the beginning of last month when the Organisation of Petroleum Exporting Countries cut its production ceiling to 16m.

He accused the companies of "playing a dangerous game" and implicitly blamed their stock policies on the continued crumbling of oil prices.

The industry acknowledges that it has been drawing down heavily on stocks. For instance, Mr David Welham, treasurer of Royal Dutch Petroleum (60 per cent owner of the Shell group), told analysts in Los Angeles last week that the level of the rundown had been substantial.

Shell declined to give its estimates of the extent of the reduction. But one major oil company put it at 1.2m b/d for the month of November and another at 1.6m b/d. Both regard Sheikh Yamani's figure as having been pitched too high as an explanation for Opec's

FRANCE IS expected to lead Iraq about FF7 900m (117m) and Italy perhaps double that to construct two pipelines linking Iraq oil fields to Saudi Arabia's Red Sea port of Yanbu, says a French trade official, Reuter reports from Paris.

Iraq has suffered a sharp cut in oil exports as a result of its four-year war with Iran. The two pipelines, begun last month and due to be completed in 11 months, will add 1.6m b/d to Iraq's oil exports.

failure so far to firm up the market. Sheik Yamani's estimate could be seen as arithmetically plausible as a deduction from projections of demand and also from the assumption of Opec output running at just under 16.5m b/d in November. In the event consumption may have been far lower than generally expected with mild weather persisting and a continuing change in the old pattern of seasonal demand.

It is understood, meanwhile, that the Soviet Union last week imposed a force majeure in supplies to Nesud Oy, the state-owned Finnish company. Other significant buyers of Soviet crude have not been affected by lower Soviet availability, apparently because of higher domestic consumption, but the volumes being sold on the spot market have been reduced, according to one regular buyer.

GM enters £100m joint venture in Mexico

By William Orme in Mexico

GENERAL MOTORS of the U.S. is entering into a US\$100m (£33m) joint production venture with Mexico's state-owned bus and lorry manufacturer, the two companies have announced here.

Diesel Nacional SA, a Government-controlled group known commercially as Dina, will own 80 per cent of the equity in the joint venture. GM will control the remaining 20 per cent of the enterprise and will manage its international marketing operations, company representatives said.

GM is investing about \$40m in the venture, while Dina is providing the equivalent of \$60m in currently under-utilised assembly installations, said Sr Joaquin Vasquez Manzanero, a Dina official.

By 1987, the jointly-owned firm is expected to be producing some 50,000 vehicles yearly, mostly for the U.S. market, with annual export earnings projected at US\$400m to US\$500m. Mexico's foreign investment laws restrict domestic sales in manufacturing of heavy diesel-powered vehicles to firms controlled by Mexican capital. GM's acceptance of a minority equity share in a new manufacturing venture here "demonstrates with facts that (Mexico's) foreign investment policy, far from being an obstacle to the participation of that capital, provides security and confirms the existence of the proper climate" for international investment, said Sr Hector Hernandez, the Mexican Commerce and Industry Minister.

The GM-Dina venture, which will necessitate the expansion of Dina's manufacturing facilities in Mexico's Ciudad Sahagun north-eastern industrial district, will employ some 10,000 assembly workers.

Terry Dodsworth in New York adds: GM has had manufacturing facilities in Mexico since 1935 through its wholly-owned subsidiary GM de Mexico, which does not fall under the new minority ownership rules for foreign companies. Its main investments are concentrated in three assembly plants for trucks, cars and engines in Mexico City, Toluca and Ramos Arizpe, although it also has about 10 small component facilities grouped near the U.S. border making parts for export to the U.S.

Christian Tyler on the U.S.'s campaign to free trade in services

Fighting to dismantle the barriers

FOR ABOUT three years the U.S. Administration has been trying to get the world to take seriously what it regards as the trade issues of the 1980s and beyond: services, high technology and overseas investment.

Last week its negotiators secured a limited tactical victory at the annual meeting in Geneva of the General Agreement on Tariffs and Trade (GATT). Against stubborn opposition from a suspicious Third World, they succeeded after seven days of procedural wrangling in accelerating the research into ways of dismantling barriers to trade in invisibles.

Service industries account for about 70 per cent of employment in the U.S. and are soaking up most of the new entrants to the labour market. The ratio is similar in the UK, which relies heavily on the export of services to balance its trade deficit in food and manufactured goods.

Cross-border transactions in banking, insurance, telecommunications and technology combined with air and sea transport and tourism spending, are estimated to be worth \$500bn (£160bn) a year. But analysis of the trade is fraught with definitional and statistical difficulty.

For example, the global trading account shows a \$100bn "deficit," almost certainly the result of under recording of invisibles. And there is the further complication of distinguishing between overseas sales and barriers to the right of establishment in foreign markets.

New York, London and Hong Kong may allow foreign banks to operate freely but many countries limit them severely. There are still few explorers in this labyrinth. Work is being done by a handful of economists at the OECD, the IMF and the European Commission. Work is also starting informally in the Gatt using raw materials provided so far by only eight countries.

Even within the EEC—and despite the requirements of the Treaty of Rome—many governments guard their domestic service industries jealously. U.S. researchers claim that, especially in the telecommunications field, the barriers to trade are rapidly multiplying. Personal privacy, national security and commercial prudence are invoked by governments to justify the exclusion or close control of foreign entities. In Third World countries local presence, often under local control, is becoming obligatory for any company—manufacturing or service—that wishes to sell in the market.

Even in the industrialised world there are restrictions on the deployment of personnel. Professional qualification earned in one country is not necessarily acceptable to another.

The U.S. campaign is motivated not just by free market ideology and national self interest. The Administration is being pushed by a powerful lobby, the coalition of service industries, led by American Express, Amex, with hundreds of thousands of card transactions to register daily, complains that it is at the mercy of national telecommunications organisations who, it claims, charge discriminatory prices for use of their telephone lines.

In the UK which has given broad governmental support to the U.S. on this issue, the City of London has its own lobby, the Liberalisation of Trade in the Services Committee (Losis).

The Japanese have also declared their support for worldwide negotiations of free trade in services. But elsewhere the response has been lukewarm at best even in Western Europe.

The process started last week is a very modest beginning. There is a lot more academic and diplomatic work to be done, before barriers to trade in services become negotiable in the GATT and the U.S. may not be prepared to wait that long.

A judge of the U.S. Court of International Trade refused on Friday to lift the embargo on imports of European steel pipe and tube imposed by the U.S. Administration, reports AP from New York. The American Institute for Imported Steel, a trade group for steel importers, sought a temporary restraining order to lift the prohibition that took effect at midnight Thursday. However, Judge Dominick Dicario said prospects of overturning the embargo are so slim that a restraining order was not justified.

Commerce Secretary, by Viscount Davignon, notes the wish of the U.S. to avoid diversion of steel products towards pipes and tubes and gives its opinion that such exports will not exceed 5.9 per cent of the U.S. market. It agrees that, in case of a distortion of the pattern of U.S. trade within the pipe and tube sector, consultation will take place.

EEC officials now say that the pact was "a forecast... a commitment to try" to limit exports to 5.9 per cent of the U.S. market.

Imports declined immediately after the letter's appearance but then surged dramatically this year to over 14 per cent of the U.S. market. Informal talks to resolve the new problem began in late 1983. But headway was only made when a

U.S. embargo on pipes and tubes was threatened, and Mr Bill Brock, the U.S. trade representative met Viscount Davignon informally last month.

The two agreed to try for a deal limiting EEC penetration to 7.6 per cent. However, several exceptions from that limitation were felt by the Americans to be defined so broadly that penetration could rise to 13 per cent.

EEC officials said the U.S. has no legal basis for the limit of pipe and tube imports since the International Trade Commission last summer failed to find they had injured American producers. U.S. officials say they have all the authority they need in the 1984 Trade Act, which presumed that the EEC had a binding

commitment to the 5.9 per cent level. U.S. officials claim, but have yet to identify, differences in Mr Brock's understanding of his agreement with Viscount Davignon, and the mandate approved by the EEC ministers. However, the Viscount insisted that the council gave "a full OK" to the proposed 7.6 per cent agreement "not changing a single comma of what had been the weekend's talks."

While the two disputants are worried about the dangers ahead in mutual trade relations and express the desire for a peaceful settlement both are maintaining tough stances.

The EEC is looking at a list of U.S. products for retaliation, which may bring about further bitterness. U.S. producers of oil industry tubular goods are threatening to file unfair trade cases against the Community to extend the temporary embargo into next year on the grounds of huge inventory build-ups as a result of the import surge.

The failure on the two sides to agree even on what was once agreed upon, bodes ill for the tough round of trade talks that will be needed to resolve this latest impasse.

SHIPPING REPORT

Japan helps big tankers make a comeback

By Andrew Fisher, Shipping Correspondent

THE BIG ships started to come into their own again on the tanker market last week. Six vessels above 200,000 deadweight tons were reported as having been fixed from the Gulf, four of them for Japan.

The largest was the Mnotaur, a VLCC (ultra large crude carrier) of 386,000 dwt capacity, which was chartered to take a part cargo of 330,000 tons of oil from Kharg Island in Iran to the Red Sea.

The rate was Worldscale 32.50, slightly down on previous weeks' levels. But the Worldscale 37 secured for the Lombard, a 230,000 dwt VLCC (very large crude carrier), for Japan was a modest advance.

Two other VLCCs, World Dignity and Japan Aster, were fixed at around the same rate from southern Gulf ports. But a 10 point premium at Worldscale 37 was obtained for Harmony Venture to Japan from the more hazardous Kharg terminal.

Two tankers featured on last week's sale and purchase market. One was a 10-year-old VLCC of 232,400 dwt, the Swedish-built Kais Knudsen under the Norwegian flag. She went to Conoco for a reported \$7.5m, said Galbraith's.

The much smaller Okiana, 34,800 dwt, was sold to Norwegian buyers for about \$10.5m. She is only three years old, also built in Sweden, and flying the Swedish flag.

Among the larger sized tankers, Opec's attempts to hold prices by squeezing output could cut demand in the shipping market, according to Drewry Shipping Consultants. Fourth-quarter tanker demand would be only 139m dwt if Opec stuck to its reduced 16m-barrels-a-day target.

This would compare with 147m dwt if Opec reached the old 17.5m-barrel ceiling set in March 1982, or 156m dwt at 19m barrels.

Iran oil exports rise IRANIAN oil exports have risen to nearly 2m barrels per day and could rise higher as Iran tries to make up a shortfall in foreign exchange earnings, diplomats said, Reuter reports from Tehran.

World Economic Indicators

INDUSTRIAL PRODUCTION (1975 = 100)

U.S.*	% change over previous year			
	Oct. '84	Sept. '84	Aug. '84	Oct. '83
	163.2	165.2	164.1	155.8
W. Germany	116.2	118.2	107.4	114.0
France	116.0	117.7	117.7	114.0
Italy	126.5	125.9	119.7	118.0
Netherlands	117.0	116.5	114.5	109.3
UK†	100.8	99.5	99.4	102.4
Japan	116.9	118.0	117.2	107.5

* 1967 = 100. † 1980 = 100. Source (except U.S., UK, Japan): Eurostat

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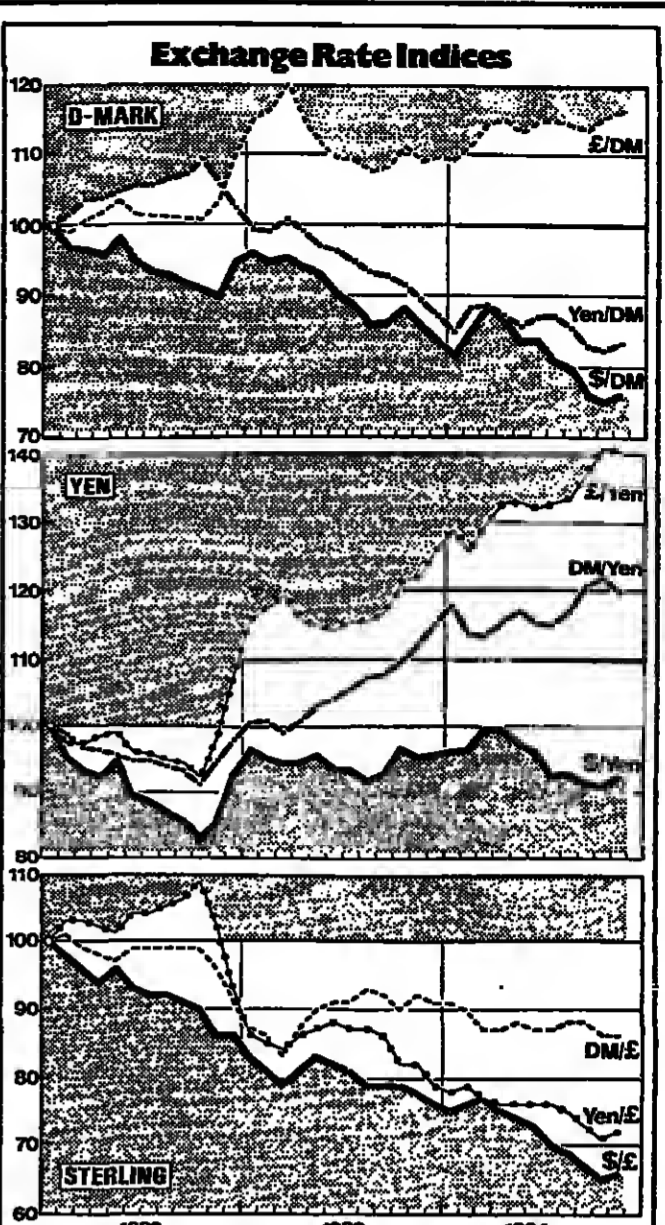
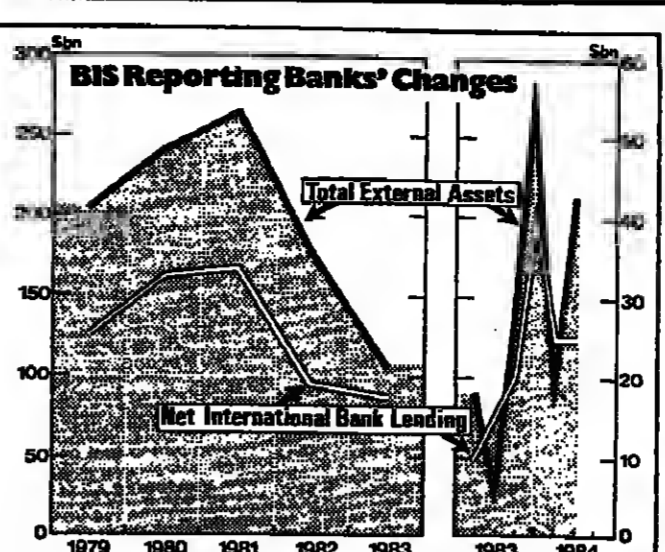
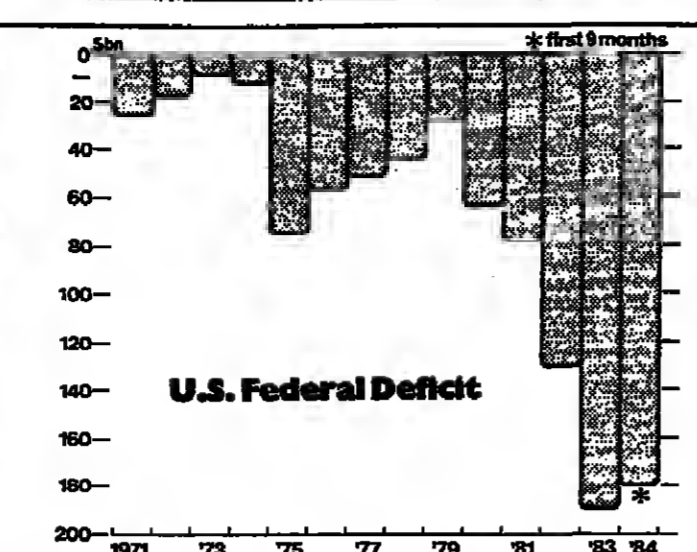
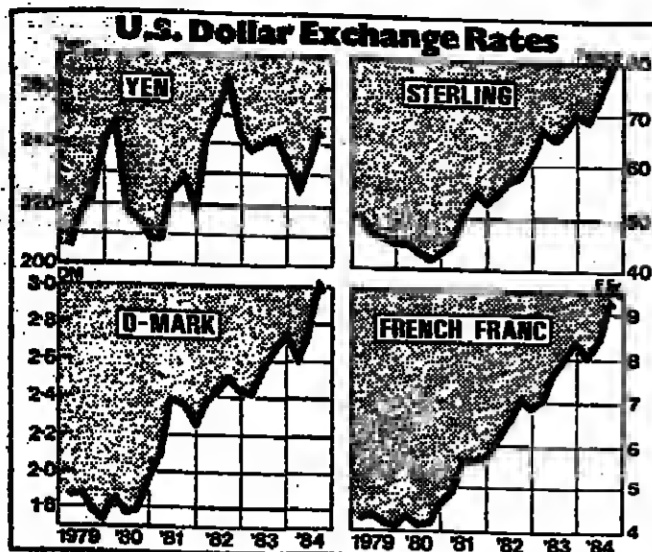
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ON 3RD DECEMBER 1984

THE FOLLOWING NUMBERS WILL REMAIN UNCHANGED

BOND SALES	01-623 7667	FLOATING RATE NOTES	01-283 8261
BOND TRADERS	01-626 5444	FOREIGN EXCHANGE	01-283 8642
COMMODITIES	01-623 7110	GOVERNMENT BONDS	01-626 3266
CONVERTIBLES	01-626 9661	INSTITUTIONAL EQUITIES	01-283 8010

STATISTICAL TRENDS: CURRENCIES



Dollar establishes enduring dominance

THE U.S. DOLLAR continues to dominate the world's currencies despite long-standing predictions of a retreat from its record run, which since the beginning of 1981 has brought on appreciation against sterling of 100 per cent and against the Deutsche mark of 50 per cent.

relative to other industrial countries, though this will not completely offset its lack of competitiveness. The U.S. inflation differentials with West Germany and Japan have narrowed considerably, down to about 2 per cent in each case.

rates attracting foreign capital flows, particularly into the bond market. Much of this investment has come from Japan. Japanese investors were attracted by the high yields offered by dollar-denominated bonds. Since then, there has been some slackening of outflows, and a rise of foreign investment capital in Japan.

summer, and mostly in the form of portfolio investment rather than banking flows. The strength of the yen has been based on the external surplus achieved this year, which has been related to the boom in the U.S. economy. If the U.S. growth rate does not rebound from the third quarter's 1.9 per cent figure, the yen could suffer.

year to October has given attractive returns to European investors because of the strong dollar. However, the greatest returns were in Japan with the combination of a strong market and a strong yen. The current account deficit may prove more difficult to finance in 1985, and with U.S. banks renewing their overseas lending they may not invest so heavily in Treasury securities as they did last year. U.S. economic growth in real terms next year could be around the level of that forecast for the UK and West Germany at 2½ to 3 per cent.

The yen has suffered less, falling in value by around 20 per cent over the same period, and by only 6 per cent in the year to October. Meanwhile the U.S. current account deficit has grown dramatically to an estimated \$100bn this year, and the federal budget deficit has climbed to an estimated \$200bn plus. Neither seems set to fall in 1985.

The rise in inflation in the U.S. expected as a result of the growth surge has so far been modest, and has therefore not exerted a downward pull on the dollar. The dollar's strength has been based partly on high interest rates.

The dollar has also been supported by the substantial fall in international bank lending, leading to a shortage of dollars in the foreign exchange markets. Overseas lending by U.S. banks moved from \$45bn in 1982 to a net repayment of \$84bn in 1983. The first six months of 1984 show a net repayment of \$8bn, but this hides a sharp rise in the second quarter in both inflows and overseas lending. Capital outflows from Japan were particularly large in the

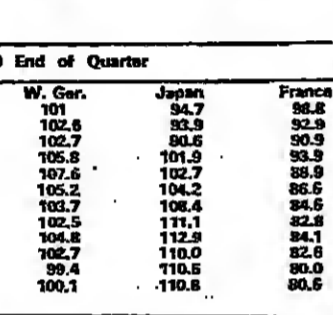
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Trade Weighted Indices

January 1982 = 100 End of Quarter

	U.S.	W. Ger.	Japan	France
1982 Q1	98.2	105.7	101	94.7
Q2	99.6	106.7	102.6	95.9
Q3	99.9	112.5	102.7	96.5
Q4	91.9	107.9	105.8	101.9
1983 Q1	88.7	111.8	107.5	102.7
Q2	91.9	113.7	105.2	95.6
Q3	90.4	116.4	103.7	108.4
Q4	80.4	117.7	102.5	111.1
1984 Q1	87.4	115.0	104.8	112.9
Q2	86.3	121.9	102.7	110.0
Q3	83.5	129.2	99.4	115.6
Nov	81.9	128.3	100.1	110.8



Real GNP Growth

% change

	U.S.	UK	W. Ger.	France	Japan
76	4.8	3.0	5.4	5.2	5.3
77	5.2	1.5	3.1	3.1	5.3
78	4.7	3.7	3.1	3.8	6.0
79	2.4	1.0	4.1	3.3	5.1
80	-0.3	-2.0	1.9	1.1	4.9
81	2.3	-0.9	0.2	0.2	4.0
82	-1.9	1.8	-1.1	2.0	3.0
83	2.7	3.3	1.3	0.7	3.0
84†	6.8	2.1	1.8	1.4	5.5
85†	3.0	2.1	2.5	2.0	4.5

† Estimate. Source: OECD/Phillips & Drew

Net Long Term Capital Flows

U.S. \$ bn

	1981	1982	1983	Q1	Q2
U.S. Portfolio	4.5	6.4	6.7	3.5	5.3
Direct	12.3	18.5	6.4	-2.3	9.2
Japan Portfolio	3.2	0.3	-5.9	-2.8	-9.5
Direct	-4.7	-4.1	-3.2	-1.5	-1.7
W. Ger. Portfolio	-2.4	-3.7	1.1	1.7	-1.4
Direct	-3.3	-2.3	-1.8	-0.2	-0.5
UK Portfolio	-7.8	-10.1	-6.8	-3.8	-0.9
Direct	-7.5	-2.8	-1.0	-0.9	-6.6

Source: Wood McKenzie

Current Account Balances

\$bn

	U.S.	UK	W. Ger.	France	Japan
76	4.4	-1.6	3.8	-3.4	3.7
77	-14.1	-0.1	4.1	-0.4	10.6
78	-14.9	1.8	3.0	7.0	18.5
79	-0.5	-1.8	-6.1	5.2	-8.7
80	1.5	8.8	-6.7	-4.2	-10.7
81	4.6	13.2	-6.4	-7.3	4.8
82	-11.2	9.3	3.3	-12.0	6.9
83	-41.8	4.4	3.9	-4.6	21
84†	-100.0	1.0	2.7	-2.5	33

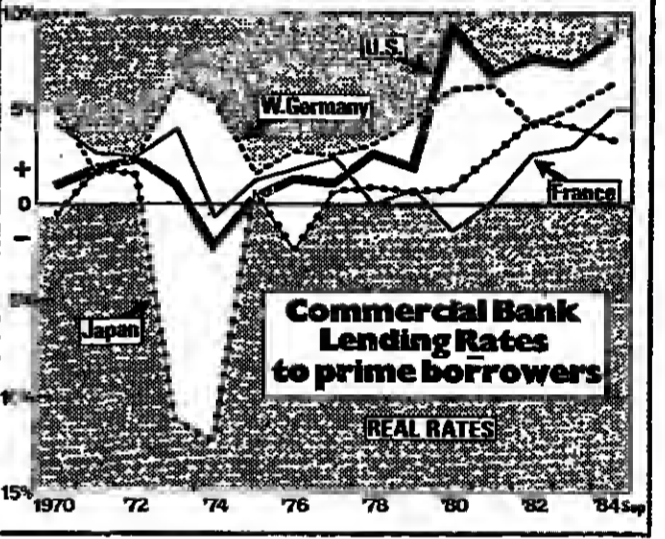
† Estimate. Source: OECD

Portfolio Investment U.S.

	80	81	82	83	Q1	Q2
INFLDQ	4.2	5.1	3.6	6.4	1.2	0.0
Equities	3.8	5.1	9.5	10.9	1.7	7.1
DUTFLDQ	-2.3	-0.2	-1.4	-4.0	0.3	0.0
Equities	-1.2	-5.5	-6.6	-3.7	0.3	-0.8

Net foreign official purchases of U.S. Govt. Securities 11.9 6.3 5.1 6.5 -0.3 -0.2

Source: Wood McKenzie



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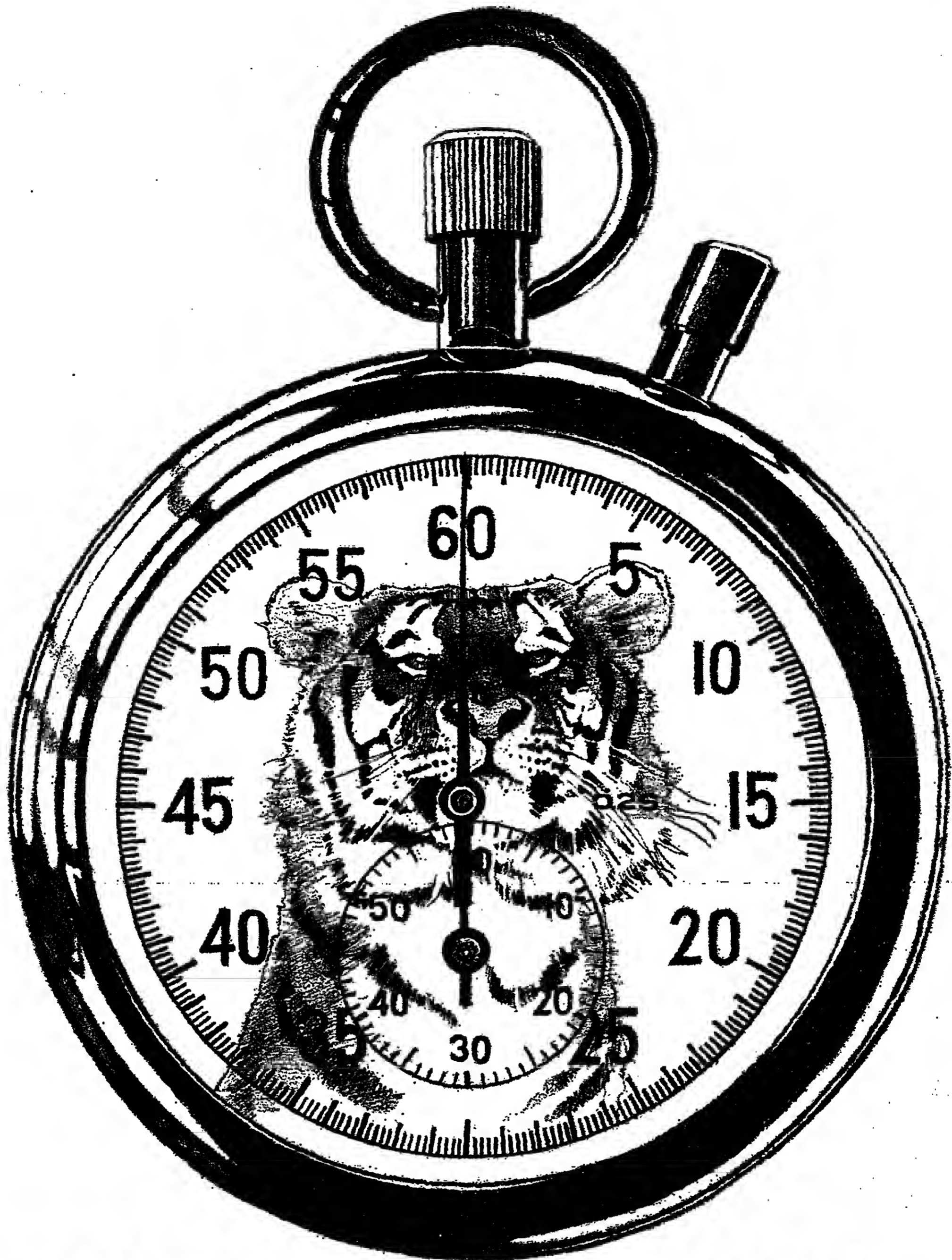
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THE MANAGEMENT PAGE

EDITED BY CHRISTOPHER LORENZ

FOR THE past four years Ian McKinlay and his colleagues, all skilled workers, have been battling to get their bosses to replace three bits of equipment vital to their job. Total cost: just over £30,000. Yet the section of the organisation for which they work has an annual revenue budget of over £7m.

The reason for their fight is that their machines have virtually worn out. Though still operable they have been completely out of service for periods totalling three weeks since July. To keep just one of them going has cost £1,500 so far this year—and the money for this has come out of someone else's departmental budget.

The problem is that McKinlay's employers admit to knowing nothing about efficient cash management. In fact, the only budgeting the organisation does is to try to work within a strict cash limit with small functional groups of employees putting their case for a slice of the cake.

In the real commercial world this approach would, they concede, provide a one-way ticket to the bankruptcy courts. But their business has nothing whatsoever to do with profit and loss accounts and dividends.

McKinlay is a consultant neurologist at the 200-bed Booth Hall Children's Hospital in Manchester, run by the National Health Service, and into which the Government is trying to inject an element of professional management.

With a payroll of more than 800,000 employees and a total revenue budget of £8bn, the NHS is effectively Europe's largest business entity with an equally large reputation for managerial inefficiency.

In February last year the Government appointed Roy Griffiths, deputy chairman and managing director of the supermarket group, J. Sainsbury, to investigate the NHS's management structure and systems. One of his recommendations was the introduction of so-called management budgets, a prescription which little Booth Hall intends to carry out in novel form just as soon as it gets the go-ahead, possibly early next year.

Along with about a dozen other hospitals across the country, Booth Hall has just completed a pilot project which it hopes will streamline its present nondescript budgeting system and, in the process, solve McKinlay's problems concerning the replacement of vital medical and surgical equipment.

Generally, the object of the pilot projects has been to design systems which involve doctors more directly in the budgeting process. The theory is that doctors are ultimately re-

National Health Service

Getting to grips with cash outflow

Arnold Kransdorff on steps being taken to budget within a major British bureaucracy

BUDGETING in the National Health Service is crude, strongly influenced by national and local political forces and subject to the bargaining strengths of individual employee pressure groups at hospital level.

It revolves around a system of fixed allocations which percolate down from the Government to regional and district health authorities; they, in turn, pass on fixed sums to individual units such as hospitals and health centres.

Every autumn the Government decides on its allocation for the Department of Health and Social Security.

Once the DHSS has this, it splits it up among its 14 health regions in England and Wales. Scotland and Ulster are funded separately.

Then, each regional authority in turn makes allocations

to individual districts. A region has between eight and 22 districts. Like the DHSS, regional authorities base their allocations on precedent and population but also take into account any major capital outlays and projects such as health visiting.

Once the funds reach district level, budgets are once again mainly influenced by historical allocations. But also taken into account are inflation, wage awards and such factors as building maintenance and changes and patterns of health care.

At this level, an increased allocation to one functional group would generally have to be offset elsewhere.

Equally, an overspend by any group would generally lead to a deduction in the following year's budget.

It is generally accepted that

much needs to be done to improve the quality of budgeting within the NHS.

Gordon Greenshields, who as general manager of the North Western Regional Health Authority is responsible for a budget of around £860m in 19 districts, says that functional decision-making is too often taken at too high a level.

"Up to now we have managed despite the management structure, rather than because of it. The system has encouraged a behaviour pattern where few managers take any initiative or stick their necks out."

"Usually far too much consultation and decision-making is arrived at through consensus, usually coming about through default. We end up with decisions which emerge from the lowest level of

resistance. We do not necessarily get the best decision, rather the one most acceptable to the most people."

Greenshields is optimistic about the new management changes. "What we are looking for is accountability and responsibility from the bottom. We have a lot of good managers who have not really had a chance to be managers. With the shackles taken off, I would think that the NHS will be an efficiently managed organisation in five years' time."

He dismisses the argument that doctors should not get involved in management. "At the end of the day good management of resources will lead to more and better health care."

One of his managers one rung down the ladder is Mike Brown, administrator of North Manchester Health

District, who controls a budget of £18m to run six hospitals, two health centres and 14 community projects.

His attitude is equally dismissive of the current management system. "We don't have a management system. It is purely a means of constraining expenditure on cash limits. As managers we have no means of knowing whether resources are being spent efficiently."

But at the level where much of the responsibility for budgeting will now rest—the doctors—a great deal of scepticism is attached to the new system, although there is widespread acceptance that the current procedures are highly unprofessional and in need of radical overhaul.

Dr John Keen, a consultant paediatrician, admits that the present budgeting system is inefficient. He welcomes the

new system but has reservations.

"Many of my colleagues feel that this is just another ploy to impose a financial ceiling. However it looks to be a more efficient way of going about things, provided we have access to all the information we need, and we're given the time to manage, and the training to know how to do it."

Although he welcomed the introduction of more professional budgeting into the NHS, Dr Tim David, another consultant paediatrician, was concerned that the new budgeting system would lead to a situation where doctors were not free to treat patients as they would wish. He was also worried that it would be "a significant consumer of time. If you want to increase my output, give me my own secretary."

and make sure that it is compatible with the fixed cash limit. If there is a problem, it then becomes easy to reassess the target case mix of admissions, or indeed the treatment; it becomes easier to make trade-offs and understand their implications.

"The system can also be used to estimate and forecast the demand made on the hospital diagnostic departments such as pathology or X-rays, so that consultants responsible for those services can plan their department's work."

"Equally important is the fact that the system enables hospital management to take a view during the year so as to be confident that they will not exceed the annual cash limit."

"All we have done is to give doctors a similar responsibility to that of the factory manager,"

as a result of such factors as changing lifestyles and Government policy decisions.

In addition, it can be used rapidly to assess the cost implications of a change in treatment patterns—a not infrequent occurrence at a teaching hospital in the forefront of medical science.

Booth Hall has devised the system with the help of management consultants Deloitte Haskins & Sells. Dennis Sherwood, a Deloitte partner and the main architect of the scheme, says that the main object of the budgeting system was to influence the behaviour of doctors, so that when there was an adverse variance to deal with, the individual was motivated to do something about it.

"To ensure this happens, a budget holder must be im-

mately involved in the budget-setting process, or be or she will not be committed to it. Furthermore, the budget itself must be a good 'simulation model' of the real world and be flexible enough to take account of changes in activity levels so that forecasting errors, inevitably inherent in all original budgets, do not distort the interpretation of the management reports during the course of the budgeted year."

To do this Sherwood and his colleagues have helped Booth Hall devise a budget-setting process based on treatment profiles. The approach has focused on U.S. research into medical classification systems, in particular one called the Diagnostic Related Group, which has defined 467 different medical conditions.

Sherwood explains: "The

doctors are asked what resources are needed to treat a typical patient for a particular condition. They then come up with a recipe for a treatment profile—a best estimate of resources to treat a typical patient with that class of complaint.

"The doctor then does an estimate of the number of admissions expected. By multiplying the number of expected admissions by the treatment profile figures, one gets a physical resource budget."

"The next step is to aggregate the total resources required by all the doctors. This gives a total financial budget, giving everything from the projected cost of aspirins to nursing staff and meals."

"With this budgeting information hospital management can then assess the overall cost

Management abstracts

Computer control at a bakery. F. J. Kelley and J. A. Collins in *Management Accounting* (U.S.), Feb 84

Describes how the Good Stuff Bakery in Los Angeles uses hand-held micros fitted to each delivery vehicle to market, order, and invoice its bakery products; at the end of the day, the micros are linked into the mainframe which prepares accounts and produces production schedules/order requests for the next delivery day; leads to less paperwork/wastage; more marketing information, and readily-accessible distribution times.

New balance sheet for managing productivity and growth. H. E. Ernst in *Harvard Business Review* (U.S.), Mar/Apr 84

Argues that liquidity and growth ought to be regarded as opposites, and demonstrates how their relationship can be highlighted by re-arranging the balance sheet, so that inventory is not treated as a current asset, and the other net current assets are grouped as a measure of liquidity; uses a series of examples—focusing mainly on IBM—to show how this approach can be used to plan strategies for growth and financing.

Employee involvement. J. Goodlad in *Management Accounting* (UK), May 84

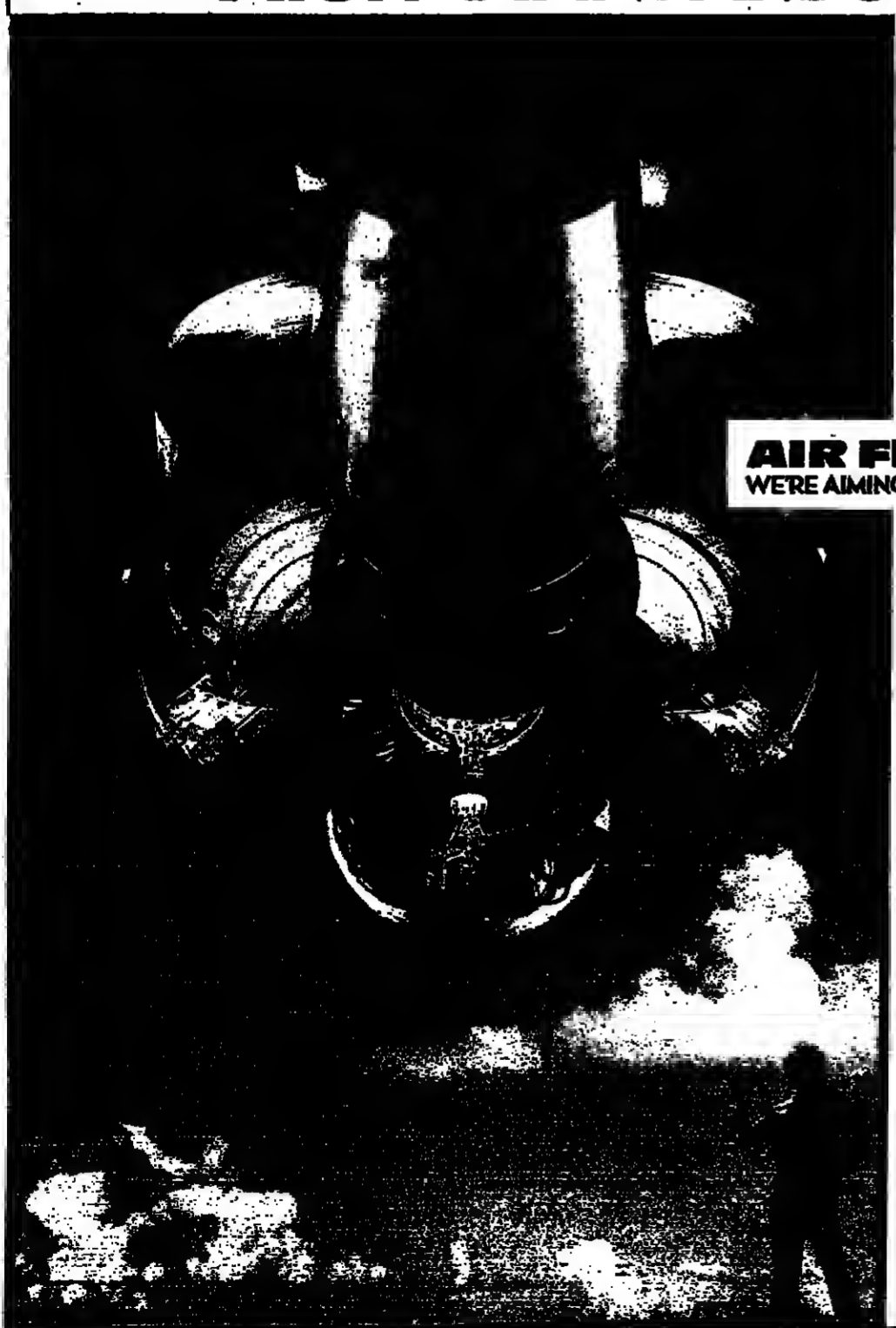
Reports on the results of a survey of companies in the north west on the involvement of non-managerial employees in the budgeting and monitoring processes; relates this to legal requirements to report upon employee involvement, but—despite a desire to confirm—finds the actual situation rather discouraging.

Adapting products to local tastes. J. S. Hill and R. R. Still in *Harvard Business Review* (U.S.), Mar/Apr 84

Reports on a survey of the ways in which multinationals adapt their products in transferring consumer goods to less-developed countries; analyses the adaptations in terms of mandatory changes (to fit local legislation), and voluntary changes (to meet the vagaries of local customs and market behaviour).

These abstracts are condensed from the abstracting journals published by Anbar Management Publications. Licensed copies of the original articles may be obtained at £3 each (including VAT and p & p; cash with order) from Anbar, PO Box 23, Wembley HA9 8DJ.

HIGH STANDARDS

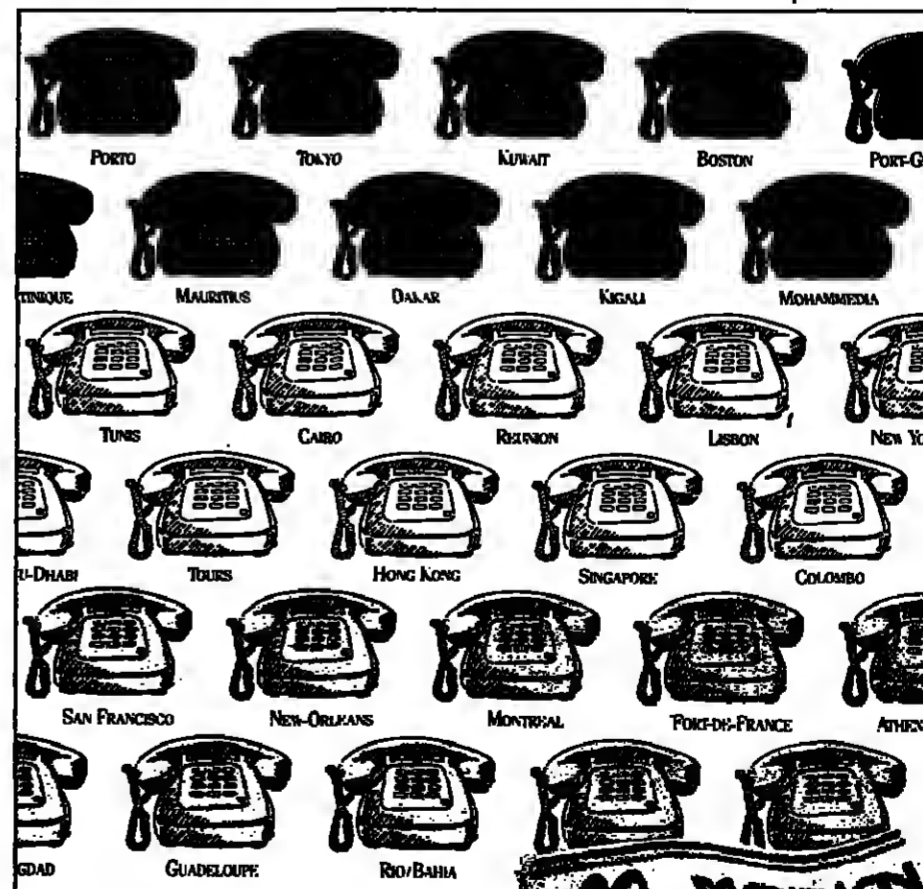


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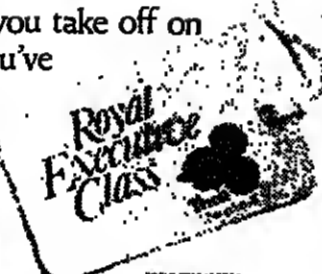
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UK NEWS

MINERS' UNION HAS £4.6m IN LUXEMBOURG BANK

NUM receiver to demand funds

BY RAYMOND HUGHES, LAW COURTS CORRESPONDENT

MR HERBERT BREWER, the High Court-appointed receiver of the assets of the National Union of Mineworkers, plans to go to Nobis-Finanz International in Luxembourg this morning to take possession of the union's £4.63m of dollar bearer bonds being held by the bank.

He will be accompanied by some or all of the four partners in Price Waterhouse, the London chartered accountants appointed by the court to sequester the NUM's assets following its refusal to pay a £200,000 contempt of court fine. Mr Brewer was appointed by the court after the NUM refused to pay the fine.

Mr Brewer, solicitor, will produce the court order making him the receiver of the "income, assets, property and effects" of the union. He will explain that he is the only person authorised to recover the funds, the union's three trustees - Mr Arthur Scargill, Mr Mick McGahey, and Mr Peter Heathfield - having been removed from office on the court's order.

Their removal automatically cancelled the authority of Mr Terence Cave, the NUM's head of administration, and Mr Stephen Hudson, its chief finance officer, in whose names the £4.63m is held in the Nobis account as nominees of the trustees.

Mr Brewer will also tell the bank that his duty is to hand the funds over to the sequestrators, whose authority from the court will also be available for the bank's inspection.

If the bank demurs, Mr Brewer and the sequestrators will seek an order requiring its compliance from a Luxembourg court.

The way was finally cleared for Mr Brewer to make his Luxembourg trip shortly after 6pm on Saturday when, at an emergency sitting of the Court of Appeal, the trustees' appeal against Friday's High Court order that they be removed and replaced by the receiver was dismissed.

Mr Scargill, the NUM president, Mr McGahey, the vice-president and Mr Heathfield, the general secretary, were in court to hear Lord Justice Stephenson say that their appeal would be rejected because they would not undertake to purge their contempt by promising to obey all court orders, past and future, made against them.

The judge, sitting with Lord Justice O'Connor, and Lord Justice Slade, expressed the hope that such an undertaking would be forthcoming after an emergency meeting of the union's national executive.

If that happened, he said, the trustees could renew their appeal.

The judges refused leave to appeal to the House of Lords, saying that if the trustees wanted to challenge their ruling they would have to seek leave from the Law Lords. Petitions for leave to appeal to the Lords are normally heard on a Thursday.

The order removing the trustees and appointing the receiver, which is effective until another High

Court hearing on Thursday, had been made on an application by 18 working miners.

Saturday's appeal was strongly resisted by their counsel, Mr David Oliver, and by counsel for the sequestrators, Mr Howard Page. Mr Oliver said that the trustees had committed a series of deliberate, premeditated and flagrant contempts of court orders and had placed the union's funds in jeopardy.

Mr Page urged the court not to accept an undertaking offered by the trustees not to touch the Luxembourg account pending next Thursday's hearing. Given their past conduct it would be "nothing more than a mockery of these proceedings," if they were given more time to further their own purposes.

Lord Justice Stephenson asked the trustees' counsel, Mr William Stubbs QC, "Have you got instructions to undertake to the court that your clients will obey all existing orders of the court and all future orders which the court may make against them?"

Mr Stubbs replied that he had not.

He urged the judges to allow the appeal. If they did not, the union's Sheffield headquarters would have to be handed over to the receiver, not a single telephone call could be made that involved the spending of union money and its 280 or so employees would not know if they would be paid next week.

He offered to strengthen the un-

dertaking the trustees had offered by sending a telex to Nobis-Finanz, giving an irrevocable order that the funds there should not be touched.

Alternatively, Mr Stubbs argued, if the receiver were to remain in the saddle it should only be in respect of the Luxembourg funds, the unfreezing of all but £250,000 of which by a Luxembourg court on Thursday on the union's application had precipitated the move for the immediate appointment of a receiver.

He pointed out that had they wished the trustees could have moved the funds out between court hearings but had not done so.

Giving judgment, Lord Justice Stephenson said that at first sight it seemed a drastic and unnecessary step to remove the trustees and appoint a receiver of all the union's assets, when all that was wanted was control over the Luxembourg funds. A partial receivership would be impractical, however, because it would leave the remaining assets in a vacuum.

The £4.63m in Luxembourg represents more than half the NUM's assets, about £8m of which have been transferred abroad in an attempt to avoid sequestration. The sequestrators have frozen £2.78m in a bank in Dublin, the fate of which will be decided at a Dublin High Court hearing on December 11. A ruling is expected shortly from a Swiss court on the sequestrators' application for the freezing of £501,000 in EBC (Schweiz), a Zurich bank.

Railway takeover plan shelved

BY PETER RIDDELL, POLITICAL EDITOR

THE GOVERNMENT has apparently lost enthusiasm for plans to privatise parts of the national rail network. This follows its refusal to intervene in support of a private sector plan for taking over the 40-mile commuter line between Fenchurch Street Station, London, and Southend in Essex. Brengreen Holdings, which had specialised in cleaning and similar contracts for local government and the National Health Service, had prepared, in conjunction with M. I. Rothschild, a feasibility study on the possibility of privatising the line.

This would have provided new services including block bookings of tickets by companies, refurbished

trains and, on board, video games, a library and newspapers.

This company has now told the Government that it has decided to shelve the project for the time being because the information provided by British Rail (BR) was insufficient.

Supporters of privatisation have drawn the inference that the Government is reluctant to press BR on the issue and they argue that BR's management is dragging its feet on privatisation, preferring to concentrate resources on electrification and improving productivity.

The official view, as reflected in a recent parliamentary answer by Mr David Mitchell, a junior transport

minister, is that the Government has told BR that it would "welcome proposals from it for more private sector finance and participation in the development of stations and railway services."

Mr Bob Reid, chairman of British Rail, predicts today that during his chairmanship BR will cut by one quarter the subsidy it receives from the taxpayer (currently an annual £325m) while improving services and embarking on a £2.2bn, five-year investment programme - the biggest for 25 years.

Both the Inter-City and freight businesses will move into profit, he says. Inter-City has a firm target to earn a profit of £34m by 1988-89.

Campaign aims to halt NHS drug cutbacks

Financial Times Reporter

UK PHARMACEUTICAL companies will spend about £250,000 (£290,000) during the next 10 days on an intensive advertising campaign. It seeks to change the Government's mind about limiting the number of drugs available to National Health Service patients.

Through their trade association - the Association of the British Pharmaceutical Industry (ABPI) - the manufacturers will maintain that the proposed measures will create "a two-tier national health service medicines plan under which the elderly, the poor and the young will receive second-class drugs for many conditions."

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UK NEWS

Thorn EMI wins £15m contract from U.S. Army

BY BRIDGET BLOOM, DEFENCE CORRESPONDENT

THORN EMI Electronics has won a £15m contract from the U.S. Army in one of the biggest international projects in defence collaboration. The contract for the new warhead is with the U.S. Army's missile command. It is worth \$90m to Martin Marietta of the U.S., Thomson Brandt of France and Diehl Giese of West Germany, which will work with Thorn for a joint venture company, MDTT.

Work on the warhead will be carried out by a joint team from the four companies under the auspices of MDTT, working principally in the U.S. It is expected to take six to seven years to complete but is then expected to lead to multi-million-dollar contracts from the four nations.

MLRS is one of the few multinational Nato-backed projects in which the U.S. and selected allied companies are responsible for joint development as well as production. However, in the first and current phase of the MLRS project, the launchers and their rockets - which have a range of some 50 km - are in effect being built under license. They are to come into service over the next few years.

It is understood that differences between the UK and its European partners on this so-called phase one production are now being solved. Mr Michael Heseltine, the British Defence Secretary, is said to have reached agreement with West Germany that the Royal Ordnance Factories as well as the designated German company will produce warheads for the rockets.

Mr Heseltine has been particularly keen to ensure business for the British company, which is on the verge of laying off several hundred employees. The ROF is on the Government's list for privatisation.

Max Wilkinson reports on an FT analysis of recent economic forecasts

Growth rate expected to ease

THE UK economy will grow by 3 per cent next year with the inflation rate held to about 5 per cent by the end of the year, according to an FT average of 21 recent forecasts, published today.

That is more pessimistic than the Treasury forecast in its autumn statement of 3½ per cent growth and 4½ per cent inflation, but the difference is within the margin of forecasting errors.

Most forecasters are expecting a slowdown in the underlying rate of growth of the economy next year, with about 1 percentage point of growth attributable to a "bounce back" after the assumed end of the miners' strike.

The strike has had the effect of depressing growth by about 1 percentage point this year. In 1985, the general expectation is that consumer spending and exports will continue to rise at a respectable pace with some slowdown in the rate of increase of imports.

Most forecasters have become significantly more pessimistic about unemployment since the last survey of forecasts in June, but they are somewhat more optimistic on the whole about short-term prospects for inflation.

A summary of exchange-rate forecasts and assumptions, included in the FT table for the first time, suggests a general view that sterling will depreciate by about 2½ per cent between its average values

	1984	1985
Gross domestic product	2.2 (2.3)	2.9 (2.7)
Consumer spending	2.0 (2.3)	2.5 (2.2)
Exports	3.0 (3.7)	4.5 (3.7)
Imports	2.2 (2.9)	4.3 (4.2)
Retail prices (all qt)	5.0 (5.1)	5.1 (5.2)
Unemployment (adult qt, 4th qt)	3.1 (3.0)	3.1 (3.0)
Balance of payments current account (£bn)	0.1 (1.6)	1.2 (1.3)
PSBR (financial year, £bn)	2.4 (2.5)	7.5 (7.4)
Stocking index (1975 = 100)	78.4	78.5
Interest rates (3-month interbank)	8.0	8.2

Figures in brackets are FT average of forecasts in July 1984

for 1984 and 1985 measured by the Sterling Index.

A modest decline in short-term interest rates is also expected, to about 8 per cent on average in 1985.

The consensus of forecasts from City of London brokers and the overall consensus of the 21 forecasters surveyed is remarkably close, with a general expectation of a slight decline in sterling and a fall of interest rates by about 1 percentage point to 9 per cent on average next year.

The City of London is, however, somewhat more pessimistic about the trend of unemployment, predicting a rise to 3.2m by the end of next year, compared with an overall consensus that it will remain broadly flat.

As with previous forecasts, the most buoyant outlook for 1985 comes from Liverpool University, which continues to believe that

tight monetary policy will push down workers' expectations of future inflation and so help to moderate the rise in wage pressures. That is expected to be an important factor in reviving the economy, with a sharp rise in output expected to continue in 1985, and leading eventually to zero inflation by 1988.

That view contrasts with that of the National Institute of Economic and Social Research in its review last week. It believes that inflationary pressures will gradually increase towards the end of the decade, and that is reflected in its forecast of 8.5 per cent inflation by the end of next year. It is the most pessimistic of all the inflation forecasts except that of Data Research Incorporated, which also has 8.5 per cent.

In the absence of government stimulus to demand, the institute sees little hope of a big regeneration of the economy and is forecasting an

average annual growth rate of only 1½ per cent between 1985 and 1988. An intermediate position between the institute's pessimism and the buoyant outlook from Liverpool, is represented by The London Business School's Centre for Economic Forecasting.

Its latest medium-term projections, up to 1988, suggest an annual average growth rate of 1.8 per cent between 1985 and 1988, somewhat better than the performance predicted by the institute, but still within reach of it.

Taking the whole period from 1981 to 1988, the London Business School suggests a trend rate of growth of about 2½ per cent a year compared with the institute's 2 per cent a year.

A more marked difference is in the two forecasting bodies' views of the trend of inflation. The institute believes inflation will rise steadily to an annual rate of 7½ per cent by the end of 1988, whereas the London Business School believes it will be little changed at about 4½ per cent by then.

On unemployment, the institute and the London Business School are about equally pessimistic. Both believe that the adult total will continue to rise to about 3.3m in 1988 compared with a figure of 3.1m for the end of this year. However, the institute's slower growth forecast produces a "hump" of 3.4m unemployed in 1988 and 1987.

Dixons seeks court ruling on battle for control of Currys

BY ALEXANDER NICOLL

DIXONS, the electrical retailer, will today ask the High Court to affirm its victory in a £25m takeover battle for control of its rival Currys.

The result was put into doubt over the weekend with an unprecedented legal challenge by Currys.

Dixons, headed by Mr Stanley Kalms, said on Friday that it commanded 50.6 per cent of Currys shares and that it was declaring its offer unconditional - allowing it, in normal circumstances, to establish control by paying for shares tendered by accepting shareholders.

Late on Friday evening, however, Currys made a final attempt to stave off defeat. With one of its shareholders, Scottish Amicable Life Assurance, it won injunctions barring Dixons from declaring its bid unconditional.

At the centre of the challenge is an attempt by Scottish Amicable to withdraw its acceptance of the Dixons offer with regard to its 0.7 per cent shareholding in Currys. S. G. Warburg, the merchant bank advising Currys, said the unsuccessful move was made "shortly after noon" on Friday.

Dixons' 50.6 per cent tally was taken at 12.15pm. Acceptances cannot be withdrawn after a bid is made unconditional, and after its announcement Dixons' increased its claimed total to 51.44 per cent.

Dixons will today seek to have the injunctions lifted, and will take control of Currys if it is successful. Urgent talks were held last night on how to resolve the very confusing situation which would arise if the injunctions were upheld.

At a hastily scheduled meeting between the City Takeover Panel, Warburg and Morgan Grenfell (Dixons' advisers), Warburg planned to seek a two or three-day standstill period during which Currys shareholders could rethink their position. It hopes that a reassessment of its defence and of the bid terms will lead more shareholders to withdraw their acceptances.

Mr Terry Curry, joint managing director of Currys, said yesterday: "I have the feeling that there were quite a few institutions which were on the verge of changing their minds and withdrawing. After Dixons' announcement, there was no point. I expect that tomorrow morning will see quite a number of withdrawals."

Warburg's plan would require Dixons to return acceptances received after 12.15pm on Friday, and not to buy more Currys shares until the standstill period was over.

Brokers in joint venture for securities market

BY JOHN MOORE, CITY CORRESPONDENT

THE CHARLES FULTON group of international moneybrokers and Cantor Fitzgerald Securities, a U.S. Government securities broker in New York, are to act as brokers for U.S. Government securities in London from February of next year.

The two groups are also planning to operate an inter-dealer broking joint venture in the restructured market in British Government securities.

The new inter-dealer broking company - to be called Charles Fulton (IDB) - is to be initially capitalised with £2m and is planned to start operating in 1985 when the new gilt-edged market becomes operational.

Last month, Wedd Durlacher Mordant, the stockbroker, announced that it was selling its minority interest in Charles Fulton to the Fulton management following the jobber's link with Barclays Bank.

Recently Exco International, the money broker and financial services group, revealed that it had tried to acquire Cantor Fitzgerald as part of its own attempts to set up an inter-dealer broking network. Exco is now backing a new company founded by London stockbrokers specialising in the gilt-edged market.

The Charles Fulton inter-dealer dealer is expected to be owned on a 60-40 basis with Cantor Fitzgerald, with the Fulton group holding the controlling interest.

Mr Bill Foy, 42, is to be managing director of the inter-dealer broker. He established and managed the gilt-edged department at stockbroker Buckmaster & Moors. Two years ago Mr Foy joined Marine Midland Bank.

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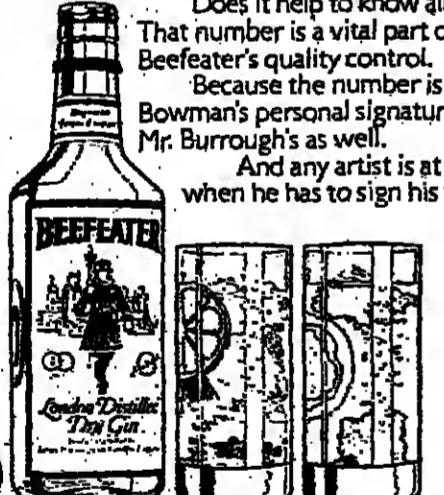
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TECHNOLOGY

ENGINEERING INNOVATION

Sewer robot set for dark debut

BY ALAN CANE

SOME ENGINEERS are driven to design bridges, other internal combustion engines or motorways.

For Nick Ouroussoff, Steve Grosvenor and Tim Reeve, the all-consuming passion is straddle carriers, the huge \$250,000 trucks used in docks to move containers to and from ships.

Existing models, they feel, are too expensive, too hard to maintain, go wrong too easily and steer badly. Yet they find it hard, as small engineering companies, to have their plans for a new generation of straddle carriers taken seriously.

"Every time I go to the Government to try to win a contract for a straddle carrier I come back with another nut machine job instead," Tim Reeve sighs ruefully.

The two companies, Ouroussoff Engineering and Grosvenor Reeve, share the same premises, the old power house at Kew Gardens in South London.

All three worked at one time for the same company, C. J. Lawrence, a firm of contract engineers which worked on, among other things, luxury motor cars.

Their interest in straddle carriers was born at this time as a result of a contract for Overseas Containers (OCL) which the company just failed to win. Now running their own businesses, they dream of straddle carriers while creating a huge array of innovative machinery to pay the bills.

"We make things that did not exist before," Nick Ouroussoff says.

The "nut machine," for example, commissioned by a Turkish businessman and hazelnut tycoon, the machine must strip the outer layers from the nuts at the rate of 1 tonne an hour, leaving a white and marketable. It involves large volumes of caustic solution, tricky to handle at any time, but promises a massive payout in cleaned nuts which are much less perishable than those cleaned by conventional baking.

It is being designed by Andrew Ritchie for Grosvenor Reeve; Ritchie is perhaps best known for his folding bicycle, (featured on this page on February 4, 1982).

Grosvenor, Reeve and Ouroussoff exemplify the old saying that an engineer can do for £1 what any damn fool can do for £2. They have just completed the first phase of trials of their "sewer robots," three foot-long contraptions of stainless steel which carry lights and their own television camera "eyes," designed to lay cable television lines in sewers.

The two companies have formed a third, "Trogitech," to market the robots. The original commission came from Cabletime, a cable television company established by the Water Research Council and UEL Group. Its idea was elegantly simple. Rather than creating a whole new network of conduits to house the cable television lines expected to be

needed with the expansion of cable television, they could be laid in sewers.

The problem was carrying the work out economically. Money could only be saved by using sewer pipes running under city streets and without digging up and replacing the old pipework.

It was essential that the cables were attached to the top of the pipe and that they were waterproof and rat proof.

Trogitech came up with three robots, all built to the same general specification but with different functions.

All three models are pulled through the nine inch diameter sewer pipes using a pair of winches, one with elaborate electronic controls to enable the robot to be positioned exactly.

All carry lights and charged device television cameras to allow the operator visual control. The first robot drills a hole vertically upwards into the wall of the sewer pipe and inserts a plastic clip. The second robot forms the cable into the right pattern and fixes it into the clip. The third wraps a stainless steel mesh around the cable to protect it from mechanical damage and rats.

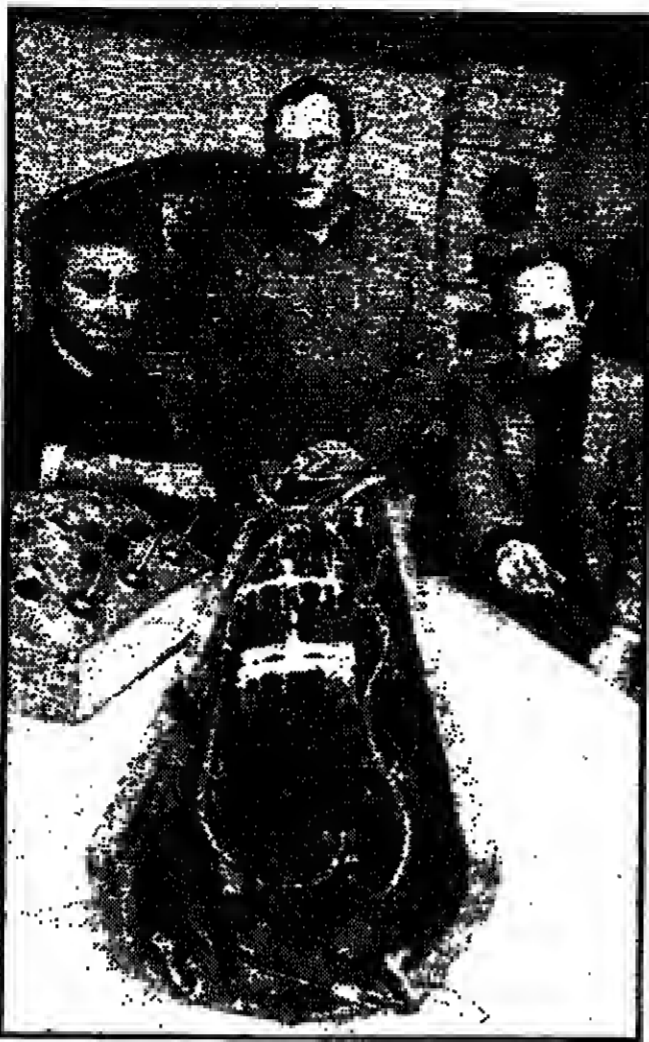
Cabletime reckoned that the robots would have to secure one fixing every one minute 15 seconds or so to be price competitive with men digging up the street. Trogitech reckons its robots can cut a minute off the specified time, making them look a very good deal indeed. Now the company is looking for new uses on oil rigs and other tubular structures.

At the other end of the spectrum, Grosvenor Reeve has developed a touch screen for a computer system which could, in quantity, cost about a quarter as much as the conventional infrared sensors used in touch screen computers manufactured by Hewlett Packard.

The principle is very simple and the company is understandably coy about revealing the details; suffice it to say that it involves a common electrical component costing only pence fitted to a fine glass screen mounted on the outside surface of the cathode ray tube. Pressure anywhere on the glass screen is detected by the components and converted into screen co-ordinates by a single chip microcomputer.

The system was originally devised for interactive video; Grosvenor Reeve see possibilities for its adoption for public computer systems — 10 travel agents, for example, where customers would be invited to put their finger, literally, on the holiday resort of their choice to see a video film of its attractions.

Grosvenor Reeve and Ouroussoff have yet to strike it rich (or build a straddle carrier) but they clearly enjoy their work. And they are sticklers for good engineering practice. As Nick Ouroussoff emphasises: "You can escalate the cost of a design by something like five times by going in without thinking about it first." Grosvenor Reeve is on 01-940 4810.



Hugh Rowledge
Steve Grosvenor, Nick Ouroussoff and Tim Reeve with the Mark 1 sewer robot.

End of the line for dedicated w-p?

IT LOOKS like the end of the line for dedicated word processors as general purpose micro-computers increasingly muscle into their territory.

This is the chief conclusion of a new report from BIS/Pedder which looks at developments in electronic office systems.

The report argues that dedicated word processors—computer systems finely tuned to handle text rather than numbers and symbols—will probably not die away completely but will find a niche in the professional typing market.

It says: "Hard learned lessons on such peripheral topics as typing pool administration and document control, if incorporated into system software, will help to prolong active life."

The evidence for BIS Pedder's assertions are contained in the mass of statistics in the report. It shows that at the end of 1983, there were 32,971 workstations installed in the UK of which the lion's share (51.4 per cent) were screen-based, displaying part of a page and worth an average £8,223 a unit. By comparison, there were 269,659 electronic typewriters installed at an average value of £924 a unit.

This market will continue to grow at a greater rate than for any other word processing equipment category, the survey concludes.

But at least another 43,708 workstations were equipped with word processing software packages at an average cost of £378 a package. The report notes: "The single biggest threat to a continuing market for suppliers of dedicated word processing systems is the virtually universal availability of word processing software packages for every general purpose computer system right down to, and including, the smallest micro."

BIS Pedder says it is impossible accurately to measure the installed population of word processing packages for reasons including bundled software with business micros, multiple sourcing and unauthorised copying.

Nevertheless, the survey estimates that some 20,185 packages were shipped in 1983 with a value of £7.5m. Market leaders were Apple, Dataview, Wordcraft and Microtrend.

Of the dedicated word processing systems shipped in 1983, British Olivetti led with 18.4 per cent with Wang in second place with 13.7 per cent a whisker ahead of IBM. The others included Wordplex, AES, Philips, ICL, Telecomputing, Data Logic and Prime.

A.C.

EDITED BY ALAN CANE

Office systems
Motorola on the Freeway

MOTOROLA IS making a major thrust into the factory and office information systems market by signing up VARs—value added resellers—in the UK, Germany, France, Sweden and Belgium.

Motorola calls the programme Freeway, and has already signed up Istel (formerly EL Information Systems), Circulus (the computer specialist subsidiary of Glynwed), Ukon Systems and AIS.

Motorola Information Systems plans that some 70 per cent of its business will in the future come from vertical markets addressed by VARs and according to marketing manager Noel Voice, Freeway has been devised "to ensure that successful and flexible partnerships can be developed."

In the first year Motorola expects to sell systems worth £3m to VARs, who will then tailor them and write specific software for their own customers. It plans to employ 20 of them by the end of next year.

Freeway agreements cover the company's Unix based products, the 2000 and 6000 series computers.

Motorola will retain its own direct sales force to sell to government and certain large buyers. Those same sales

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Tom Green
01-346 7133/0277-354141

personnel will also service the VARs so that none of them find themselves in competition with Motorola. More on 0628 39121.

Inspection
Infra-red gauging

A gauging system that uses infra-red to transmit readings from the measuring head to a receiver has been developed by Multiswitch of Cheddle, Cheshire.

Designed for the in-process measurement of workpiece position, tolerances, errors due to thermal drift and tool wear checking, the measuring head consists of a combined probe and infra-red transmitter for three dimensional co-ordinate checking.

The probe body has a receptacle designed to fit a standard tool holder, enabling it to be stored in a tool magazine. For in-process inspection, the probe is simply loaded into the machine by command of the controlling NC computer. The system accuracy is 0.001mm. More on 061 437 1234.

GULFAIR GOLDEN ROUTES

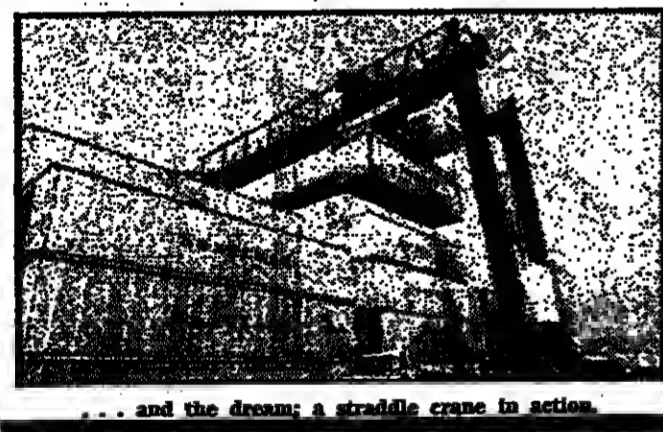
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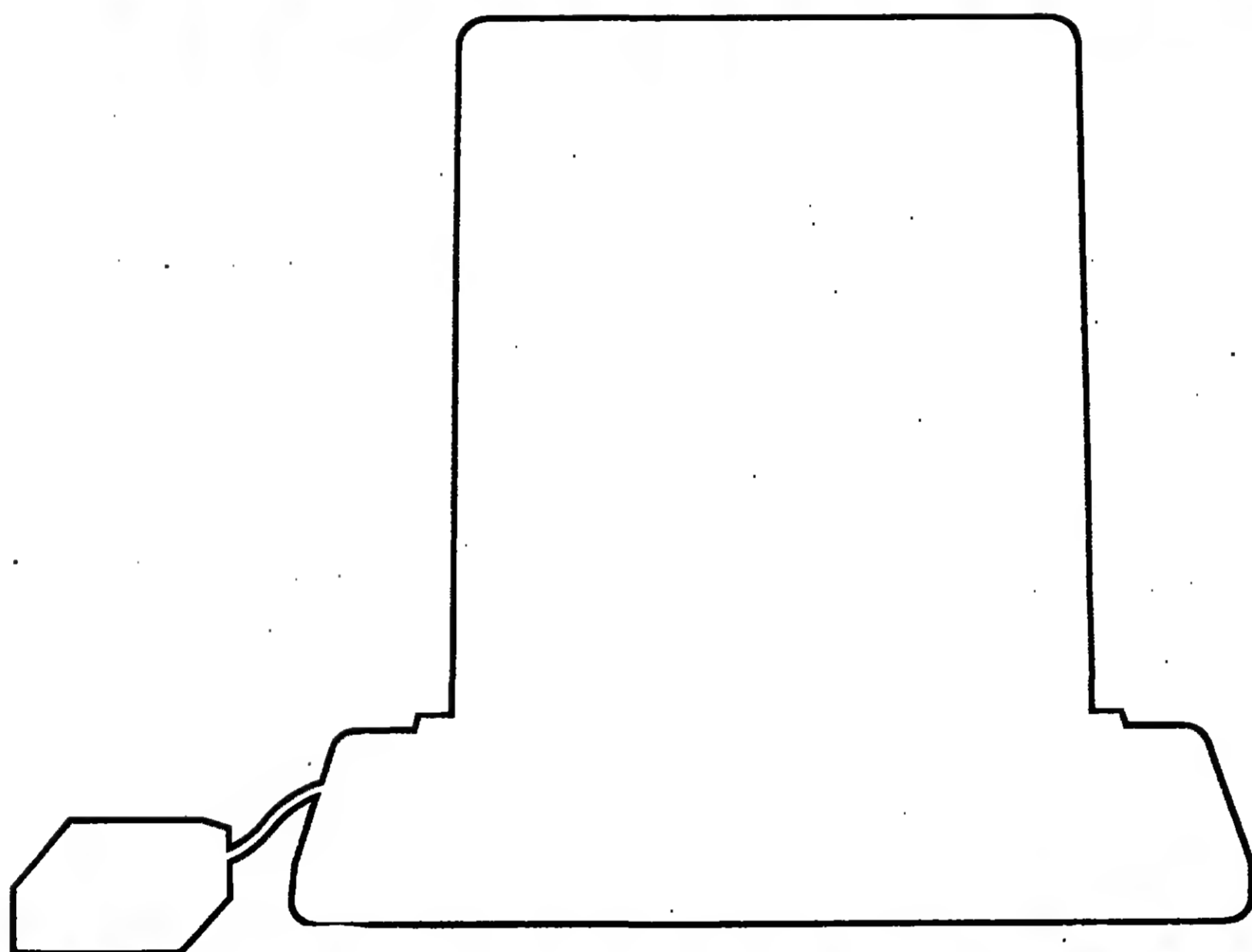
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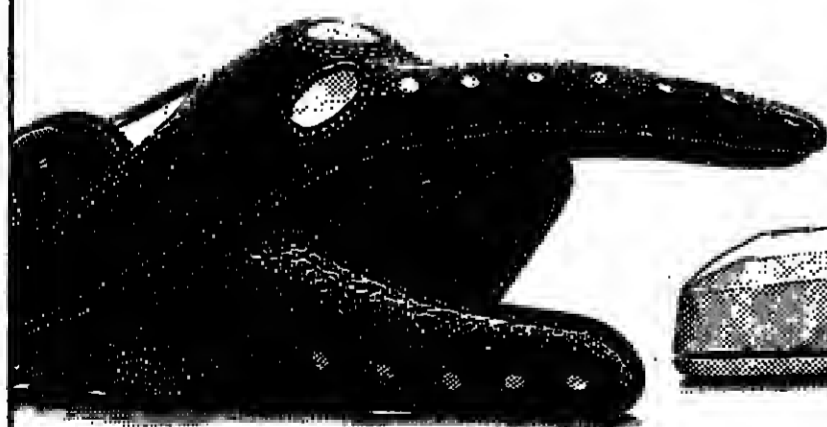
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THE ARTS

Royal Philharmonic/Festival Hall

David Murray

On Thursday Walter Weller conducted the Royal Philharmonic and then some with the full complement of supernumerary players for Stravinsky's Poeme de l'extase and Stravinsky's Sacre du printemps...

Metanoia/Purcell Room

Andrew Clements

This group of variable size is based upon the trumpet of Jonathan Impett and the keyboards of Michael Blake, recruiting other instrumentalists as and when necessary...

J. K. Parker/Elizabeth Hall

Dominic Gill

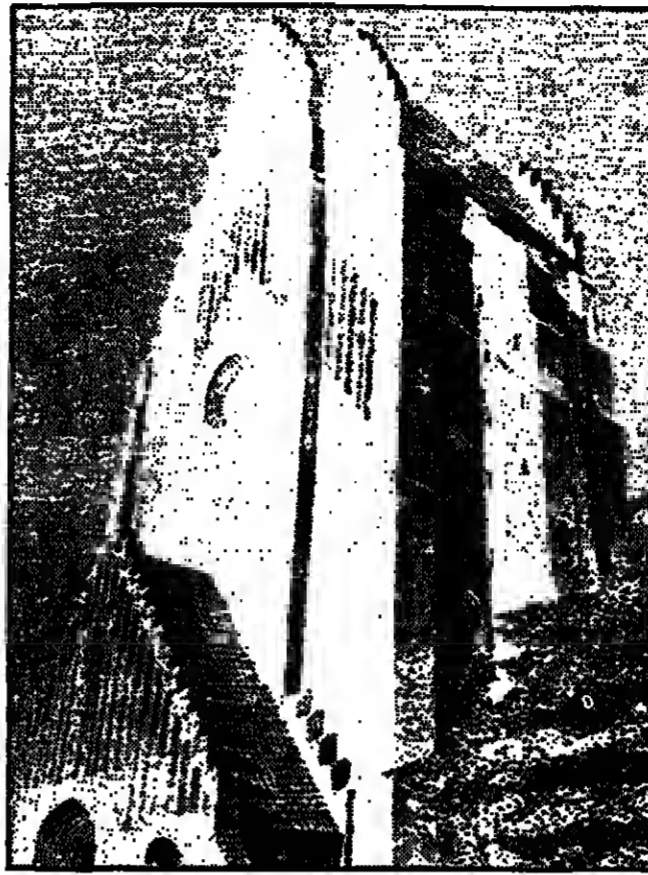
I did not hear Jon Kimura Parker's recital in the final rounds of this year's Leeds Piano Competition from which he emerged the first prizewinner...

Architecture

Colin Amery

Through lens and eye

The influence of painters and photographers on the history of architecture has never been thoroughly examined. The publication of modern architecture in periodicals and books depends largely on the skills of the photographer...



Grundtvig's Church in Copenhagen painted by Glyn Boyd Harte.

two watercolours of the latest example of the work of the British architect James Stirling, the Staatsgalerie in Stuttgart. The period that the history of photography has determined for this book happens to coincide with the period of rapid growth in London...

Rostropovich/Festival Hall

Max Loppert

On Saturday the English Chamber Orchestra invited one of its most celebrated long-time associates, Rostropovich, to preside over a concert containing a cello concerto in each of its halves...

Parker & Nowak/Barbican Hall

David Murray

Appearing with the London Symphony on Saturday were two young winners of recent competitions, the conductor Grzegorz Nizak and the pianist Ernest Ansermet...

Bringing it Home/Cockpit

Michael Coveney

This gloomily strident new play by the Irish writer Seamus Finnegan was commissioned by the Cockpit Youth Theatre, who perform it with a dispiriting intensity under Julia Pascal's direction...

Book Review

Arthur Jacobs

On perusing the opera-goer's Wisden

Opera on Record, 2. Edited by Alan Blyth. Hutchinson, £16.35. "Third and last," says the blurb; and "definitely the final volume," proclaims Alan Blyth in his editorial introduction...

Arts Guide

Monday/Tuesday, Opera and Ballet; Tuesday, Theatre/Wednesday, Exhibitions/Thursday, A selective guide to all the Arts appears each Friday.

Nov 30-Dec 6

Music

PARIS

Janet Baker, soprano, Geoffrey Parsons, conductor. Schumann (Mon), 19.30 (198444).

WASHINGTON

National Symphony (Concert Hall) Glinzer, conductor. Concerto in G minor, Brahms; Piano Concerto in G minor, Beethoven...

CHICAGO

Chicago Symphony (Orchestra Hall) Kurt Masur, conductor. American Rhapsody, Copland; Concerto in G minor, Beethoven...

VIENNA

Händel's Messiah, the Vienna Madrigal Choir conducted by Xaver Mayer; Cantatas by Schubert...

NEW YORK

New York Philharmonic (Avery Fisher Hall) Zubin Mehta, conductor. Tchaikovsky's Symphony No. 5...

LONDON

Oso Philharmonic Orchestra, Mariss Yansons, conductor. Janáček's Sinfonietta; Concerto for Piano and Orchestra...

Haitink/Festival Hall

Andrew Clements

Bernard Haitink's three-concert series with the London Philharmonic ended on Tuesday with two of the composers who began it last week - Elgar and Vaughan Williams...

Orpheus/Upstream

Martin Hoyle

The little Upstream in Waterloo is often the scene of interesting revivals, excursions and novelties. In the footsteps of the enterprising Chorus company...

Arts Guide continued with more listings for various cities and venues.

WORLD VALUE OF THE DOLLAR every Friday in the Financial Times

FINANCIAL TIMES

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Monday December 3 1984

Gatt's future at stake

THE Gatt is both a set of trading rules and a world forum for negotiating and defending them. Its success—and survival—ultimately depend on confidence and consensus. But in the past week we have witnessed something close to a crisis of confidence in the open trading system and the appearance of some dangerous cracks in the institutional consensus.

The United States must accept a large part of the blame for this. Its contradictory behaviour and aggressive diplomacy have not only aroused the EEC, but seriously antagonised the developing countries, which comprise two-thirds of the Gatt's 90 member nations. There is now a distinct and apparently cohesive Third World lobby in the Gatt, led by India and Brazil. If the traditionally pragmatic Gatt becomes, like Unctad, a North-South shouting shop more concerned with ideology than with commercial relations, then the prospects for a successful new round of talks on trade liberalisation will be bleak indeed.

Last week President Reagan decided to block imports of European steel pipes and tubes, an act denounced by the European Commissioner, Viscount Davignon, as "the closing of the American border." The failure of both sides to agree a voluntary arrangement—itsself a derogation from Gatt principles—may not be wholly the Americans' fault. But the incident is further depressing evidence of the gap between free-trade rhetoric and political action. A long EEC-US wrangle about compensation, as happened in the case of special steels, is about to begin.

Inconsistency

Even as it was closing its doors to foreign steel, the U.S. Administration was preaching in Geneva the virtues of free trade in services, and announcing a reluctant Third World in order to get the question put formally on the Gatt agenda.

The inconsistency of the U.S. position must be painfully apparent during the seven days of closed-door negotiations which overshadowed the Gatt annual meeting. In this procedural struggle the U.S. found itself isolated even from countries like the UK and Japan which are equally keen to see trade in services brought into the Gatt disciplines.

The U.S. is right to press the services issue, and not just because industries like finance, transport, telecommunications and tourism now employ a majority of workers in many

The right to know

SOMETIME soonish the British Government is going to have to do something, or at least say something, about Freedom of Information. The phrase is a catch-all, sometimes written with capital letters, sometimes not. What it means, in practice, is greater access for the public to information that is officially held or, to put the more subtly greater discretion on the part of public servants to disclose what information they have.

The present system does not work. There is an Official Secrets Act, drawn up hastily in 1911. Section Two of which makes it an offence for any person holding office under Her Majesty to communicate without authority to any person any information which has been obtained because of his official position—and for any person to receive such information.

It has been widely agreed for decades that at least that section of the Act needs to be reformed: see, for example, the Fulton Report on the Civil Service which came down against unnecessary government secrecy in the 1960s, or the more narrowly based report of the Franks Committee in 1972 which recommended that Section Two should be repealed and replaced by a new Official Information Act with more specific provisions.

Blunderbuss

Indeed, the only credible intellectual defence of the 1911 Act in recent years has been a blunderbuss, that no civilised government would design to use it. We now know that that view is not tenable. Mrs Thatcher's Government may be civilised, even liberal, in many ways, but it is not above resorting to any old Act, however discredited, on the statute book, if it wants to enforce a point.

The particular case concerns a senior civil servant at the Ministry of Defence who disclosed some information about the sinking of the Belgrano during the Falklands War. But the details do not matter. The principles do. They are that

under present legislation the Civil Service is not allowed to provide information and that the public has no right to know—rights which you think about it for a moment, is manifestly ridiculous in a parliamentary democracy, or in a democracy of any kind.

The only question is not whether there should be reform, but how it should be arranged.

Previously we have argued that legislation about greater public access to information is necessarily the best way of ensuring at least an essential first step. The Government could simply give a signal by taking a more relaxed attitude to the way in which information is disseminated. Legislative change could come later. This gradualist approach was discussed, and respected, by Lord Scarman in his Granada Guildhall lecture last week, though in the end he rejected it.

Contradiction

Lord Scarman made several telling points. For example, the 1911 Act is way out of line with—indeed contradicts—much of contemporary legislation. Section 10 of the Contempt of Court Act 1981 seems designed to give a measure of protection to those civil servants who provide information and to those who receive it, even if the courts have not yet fully interpreted it in that way. That is wholly at odds with the Act of 1911.

Lord Scarman concluded that the present confusion and lack of consistent principle render the law "obscure, difficult and on occasions seemingly arbitrary." He wants the right to know to be formally set out in legislation. For that, it may be a little premature. One of the faults of the 1911 Act was that it was produced in a hurry and the prevailing system is haphazard, undemocratic and not conducive to good administration. The Government ought to have something to say about the statute in a green or white paper pretty soon.

MOST SUGGESTED quick ways of providing jobs are specious and superficial, because they suggest that an entity called government can bring jobs into existence by playing with numbers and pieces of paper without any costs or sacrifice on anyone's part.

There is, however, one suggestion on this front which cannot be turned down so easily. This is based on the fact that the average person out of work involves a public expenditure cost of £1,950 per annum according to a written parliamentary answer given by Mr Peter Rees, Chief Secretary to the Treasury, on July 10.

The estimate covers unemployment pay, supplementary benefits and housing benefits plus an allowance for administrative costs.

The argument, which has some validity, runs as follows: Would it not be better to pay this sum to people for doing something rather than nothing—assuming, that is, that they do not already work in the "black economy"?

There are innumerable tasks which remain undone, because we cannot afford to pay for them. At least as important—and far more labour-intensive—than the sewers and roads which the infrastructure lobby calls for are service activities ranging from home help, ancillary services in hospitals, clearing and maintenance of parks and streets, services for old people and thousands of others. Would not everyone out of a job for, say, over six months, be better off with the option of doing such work at a rate equivalent to, say, 10 per cent above the normal dole?

How much would a dole-plus scheme cost? Let us round up to £2,000, the official estimates of the benefit cost per unemployed person, and take jobs played out to mean another 10 per cent. Add another 30 per cent for supervision, materials, and so on. We then arrive at 40 per cent of £2,000, ie £800 per person per year. To do this would cost £1,000 to take into account travel-to-work expenses and any other cost elements overlooked.

An ideal target for the scheme might be in the region of 100,000 places, but it would be unrealistic to expect take-up to amount to more than 50,000, at least initially. This gives a net Exchequer cost of £500m. This is less than two-fifths of 1 per cent of public expenditure in 1982-83, or a eighth of the average error in forecasting the PSBR at Budget time.

The Institute for Fiscal Studies has kindly made available to me some rough estimates of the implications of offering everyone unemployed for over six months or a year a basic £34 per week to work in special projects. This sum is based on topping up the benefit rates prevailing in 1983-84 (year starting in November).

Existing social security payments would supplement the £34 basic pay. People at that income level would normally



A training scheme in Dover, Kent.

have their housing costs met. The typical single person—a category which makes up over half the unemployed—would be £7 a week better off than on the dole or supplementary benefit.

The more serious problem is with the childless couple with a dependent wife. Such a couple could be nearly £10 worse off on special work, simply because Family Income Supplement is not payable to childless couples. The cost of extending FIS to such couples would only be about £200m per annum.

People active in the employment opportunities field will be quick to point out that there is already a Community Programme, administered by the Manpower Services Commission. Sir Geoffrey Howe made available in 1982 increased funds for the programme to finance 100,000 new places. Including people absorbed from earlier programmes the target is 150,000 places, of which 120,000 had been filled by October 1984.

Projects under the Community Programme are not directly organised by the MSC, but prepared for the latter's approval by local authorities and voluntary organisations, and sometimes by a very indirect route, private sector employers. The basic of places must go to young people under 24 unemployed for more than six months, or older people unemployed for more than a year.

• Maximum reimbursement is £63 per week per filled place for up to a year.

• Existing business or jobs must not be put at risk ("no displacement").

• The appropriate local union rate for the job must be paid. This is reconciled with the £63 limit by mixing part-time with full-time workers.

This last feature, which is very different from the principle suggested at the beginning of this article, is inevitable given the tripartite nature of the MSC on which government, union and employers are all represented; and the net cost per job is about twice the estimate I suggested. Even so the Community Programme is much the most effective of official job programmes. The net cost (after taking into account benefit saved and some tax receipts) is about 30 per cent of the gross of £600m per annum.

Looking ahead, there are three possibilities. One is to expand the existing Community Programme—some of those involved believe that a good 500,000 places could be provided with more funds and more publicity. A second possibility would be to modify the programme. It would be similar to get rid of the "rate for the job" under a tripartite structure, but the "no displacement rule" might be

SOME COMMUNITY PROJECTS

- **IMPROVING THE ENVIRONMENT**
Clearing canals and constructing footpaths.
Making cycle tracks from disused railway lines.
Reclaiming disused land for public use in inner city areas.
Clearing and fencing off derelict areas.
Conserving the coastline.
- **ENERGY CONSERVATION**
Insulating lofts for elderly people.
Advising people on the cost-effective use of energy.
Roof insulation and draught-proofing of publicly-owned dwellings.
- **PROVIDING SOCIAL AMENITIES**
Providing playgrounds in inner city areas.
Providing crèche facilities for one-parent families.
Improving sports amenities for public use.
Converting warehouses into community centres.
Constructing adventure playgrounds.
Improving buildings and land for camping sites.
Creating picnic areas and nature trails.
Providing new allotments.
- **HELPING LOCAL PEOPLE**
Gardening work for physically handicapped people.
Producing a directory of amenities for disabled people.
Running lunch clubs for elderly people.
Advising elderly people on how to avoid hypothermia.
Interior decorating service for elderly/disabled people.
Renovating clothing and furniture for use by social services.

supply of labour over demand. Indeed, there is a third more far reaching aspect. Suppose special labour schemes are not confined to optional extras such as brightening up hospitals or improving the environment. Suppose that the schemes become competitive with work already carried out by local government employees, health service workers, or for that matter private sector contracting labour. Then union labour would be undercut and the Government would at last have a wedge to insert into the rigid wage structure which it rightly, if unsubtly, maintains as responsible for unemployment in the first instance.

How far to go along that route would depend on the balance struck between discretion and valour. Before deciding, it is worth asking: why do private entrepreneurs not only want the unemployed at all above the dole? Or why do the unemployed not organise themselves into co-operatives and price themselves into work? The fundamental answers lie in the union-dominated, rate-for-the-job culture of the labour market. It would be a brave entrepreneur or co-operative who incurred the odium of providing "scab" labour at a third of the union wage. Specially established state agencies might be able to take a stronger line.

A wedge is not better than a hammer. And any effect of dole-plus work in shaking up the wage structure must be long-term and indirect. Moreover, I know that in mentioning this aspect I risk alienating not only the Low Pay Unit, but many middle-of-the-road enthusiasts for community work.

So be it. But as in so many other contexts, I can only beg those who really have the welfare of the poor at heart not to waste their energies trying to prove that demand curves do not slope downwards, and that wage runs uphill. Instead they would do better to devote their efforts to analysing and advising on the changes in the structure of property ownership and in taxes and benefits which would make lower and more flexible wages compatible with a tolerable distribution of income and wealth.

Meanwhile, one must remind the present Government that however counterproductive are many of the Heathite remedies proposed for unemployment, the combination of unsatisfied needs and unused human labour is a logical and economic, as well as a social scandal. The Public Expenditure Review was a last opportunity to expand programmes such as Community Programmes at the expense of worthless interest group programmes. The question needs to be reopened well before the next Review.

Jobs, pay, unions and the ownership of capital

A booklet containing reprints of Samuel Brittan's recent articles on the subject is available from Nicola Banham, Publicity Department, Financial Times, Bracken House, Cannon Street, London EC4A 3DF, price £1.25, including postage.

Beanstick men of Hong Kong

FOR all the controversy over the assessment office set up in Hong Kong by the British government to report on local reactions to the Sino-British agreement on the colony's future, its newly-published report gives a rare and colourful insight into the kaleidoscope of minds that make up the Hong Kong scene.

Take Yung Tak, chairman of the Tai Chung Hui village mutual aid committee. He wrote in one of the 2,494 documents submitted to the assessment office "It is in autumn when the weather is fine, with chrysanthemums blossoming, and the refreshing zephyr blowing, that China and Britain initial the agreement on the question of Hong Kong's future."

In case anyone was uncertain about his community's views on the Sino-British agreement he adds, "Hong Kong people rejoice to hear the encouraging tidings of the joint declaration that their Utopia will be preserved."



"Apparently if you have two children at university you'll get a reduction on the new dog licence"

Men and Matters

But not everyone shares Yung Tak's views, or his lyrical style. Not least among the opposition is the New Territories Poems and Songs club which says in simple prose that it has been "extremely disappointed" by the agreement.

The Hong Kong Kowloon Cane-Woven Ware workers' union has accused Britain of an under the table deal with China that was "an heinous crime of enslaving and persecuting the free people of the colony." The union goes on to warn of a communist Chinese regime that "boxes the people with honeyed words and heartening promises but with a murderous heart."

The Hair Dressing and Make-Up Trade Workers union promises, meanwhile, to stand close to the Hong Kong citizens to take part in community affairs and contribute to the stability and prosperity of the colony.

The Dried Beanstick Trade Workers' union is nothing like so coy. It says Britain is betraying the Hong Kong people by initiating the agreement "with an obsequious and compromising attitude" and asks "Where have the national dignity and prestige of the British government gone to..."

Science rules

Mrs Thatcher has always taken with the utmost seriousness the fact that she is the first British Prime Minister with a science degree. Not only is she Fellow of the Royal Society, but she has also, during her premiership, appointed herself minister with overall responsibility for science policy in addition to her other burdens.

On Friday she and her education secretary, Sir Keith Joseph, will appear at a private seminar at All Souls College, Oxford, one of a series, to discuss political choices for

UNEMPLOYMENT IN BRITAIN

BY DURATION	BY HOUSEHOLD TYPE
Oct. 1984 (millions)	(%)
Total	3,225
Over 25 weeks	1,823
Over 52 weeks	1,277
Over 26 weeks (aged under 25)	0,561
Over 52 weeks (aged under 25)	0,266
Single	56
Couples, 0 children	18
" 1 child	8
" 2 children	10
" 3 children	4
" 4 children or more	4

Based on General Household Survey 1982 report.

Oxford dollars

David Young, the lively American founder of Oxford Analytica, an Oxford-based research and consulting group, ought to be providing occasionally underemployed academics with work.

He has just launched a daily briefing service of up to five news analyses transmitted via the Teletext system on a subscriber basis. In doing so he is providing part-time work for a dozen dons associated with the venture.

Young trained as a lawyer, worked as an aide to Henry Kissinger in the U.S. National Security Council, and then moved on to a White House liaison job.

He set up Oxford Analytica in 1975. In providing lucrative freelance work for a large number of dons—few of whom seem to have any professional qualms about potential conflicts of interest—he has become a popular figure in most senior common rooms among the dreaming spires.

The dons are at pains to emphasise that their students always come first—although it is not unknown for tutorials to be postponed to make way for an Oxford Analytica deadline.

As if to underline that claim, after a recent lunch to tell the wider world about the service, virtually all the dons left promptly at 2 pm, foregoing the cheese and port—to attend tutorials, or so they said.

MEMO

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Observer

IT WILL BE with sinking hearts that the European Community heads of state and of government...

Foreign Affairs: the EEC

The only way out of the impasse

By Ian Davidson

At their last summit, at Fontainebleau before the summer holidays, the interlocking quarrels over Britain's excessive contributions to the European budget...

It was not to be. As if to underline the defects of the Community's decision-making processes, not merely did the 10 foreign ministers fail to conclude negotiations with Spain and Portugal...

This is a pity, because it means that they will have much less time to discuss the real issues. It turns out that the Dooge report is a much more interesting document than seemed at all likely when the committee was set up three months ago.

a more integrated Community, and these which are reluctant to make any such move. In the first camp are all six original members of the Community...

Curiously, the objections of the foot-draggers are not directed primarily at the substance of the proposals set out in the report. To be sure, the so-called "footnote countries" (after the regularity with which they object to any political innovation in the Community) express all the expected reservations...

By contrast, footnotes abound when we get to the parts which describe how we get there from here. This is the nub of the problem. After all, the Community has for years declared its devotion to all kinds of grandiose objectives—economic and monetary union, European Union, you name it. But in practice progress has been negligible because it has been held back, through the operation of the veto principle...

versely, the reluctance to take votes simply encourages ministers to stick indefinitely to wholly unreasonable positions, as we have seen so often during the past 19 years.

Thus far, one can only see deadlock. The problem for the integrationists is to put pressure on the minimalist; if they can induce the British, at least, to be a bit more wholehearted about the Community, the odds against the footnote countries lengthen immeasurably.

But it is important to put majority voting in the right perspective. When the authors of the Rome Treaty framed this principle, it was not because they wished or expected individual member governments to be regularly outvoted by hostile coalitions, and thus placed in domestic difficulties at home...

antagonism to the general aspirations of the "good Europeans" and Mrs Thatcher is not good at submitting to external pressure.

More dramatically, they propose an intergovernmental conference to negotiate a new treaty of European Union, which would incorporate the substantive objectives of the Dooge report including, of course, public acquiescence in the principle of majority voting.

There are those in Whitehall, and they include committed Europeans, who fear that this attempt to force the pace could prove a high-risk strategy all round, with real dangers of backfire. At one level, there is Anglo-Saxon mistrust of grandiloquent but foggy Euro-fanaticism, in which none of the utility of the proposed treaty have yet been properly worked out.

It is all very well to scoff at Chancellor Helmut Kohl as an old muddle-head who does not really know what he wants or how to get it. But it simply will not do for Mrs Thatcher to assume that hers is the only conception of the European Community which is valid and sensible.

In particular, it will not do to assume that the Community can take a leisurely view. Britain, above all, has been banging on about the urgent need to sweep away all barriers to internal trade.

There are those in Whitehall, and they include committed Europeans, who fear that this attempt to force the pace could prove a high-risk strategy all round, with real dangers of backfire. At one level, there is Anglo-Saxon mistrust of grandiloquent but foggy Euro-fanaticism, in which none of the utility of the proposed treaty have yet been properly worked out.

mutually uncomprehending national government leaders. There is another method of political mobilisation, more discreet, insidious and tentacular, which for 20 years was identified with the name and influence of Jean Monnet.

The essence of the Monnet method was that he bypassed the national governments as such, but exercised his relentless powers of persuasion on representatives of national political parties, in opposition as well as in government.

Today, a new attempt is being made to revive the Monnet method, by co-opting leading figures across the political spectrum in support of European integration, but this time also by approaching national governments. The object is not to produce yet another Wise Men's exhortation, but to muster political leverage in national capitals for precise programmes of action in priority policy fields.

Lombard Culture's role in crumbling Africa

By Nicholas Colchester

EXPLOITED REASONABLENESS is an historic source of management indignation. Take a man who runs a cost centre and keeps his outfit lean. He sticks to logical budgets...

There was probably an element of this in the frustration displayed by Sir John Burgh at a lunch in the House of Commons last week. Sir John is director general of the British Council, which this month celebrates its 50th anniversary.

The British Council suffered, along with other areas of the overseas budget, in order that the development aid budget be kept relatively intact at a time when famine in sub-Saharan Africa had given aid sudden political clout in the UK.

The argument does, however, have an element of presumption built into it—that the former dependencies will develop and, like Malaysia, become lucrative markets. In reality, the "South" has now split into winners and losers.

These differences have per-



Mitterrand greeting Mrs Thatcher at the Franco-British meeting in Paris last week

The real wage debate

From Mr J. Robinson

Sir—Bryan Gould's article on wage restraint (November 28) makes for depressing reading but, fortunately for the unemployed, it is also misleading. The key to the real wage debate which has raged for so long is the division of an increase in aggregate demand between an increase in output and an increase in prices.

Thus while one cannot argue that the American recovery has been fuelled by a real wage rise (as the Chancellor ever argued this?), one can indeed argue that real wage flexibility has been an essential prerequisite of the recovery.

Mr Gould introduces a red herring into the widely-held view that real wage flexibility is an essential means of reducing unemployment with the rather odder view that flexibility is an essential means of a sufficient means. To disprove the latter view he attempts to show that a cut in real wages would not reduce unemployment. Unfortunately he does not enlighten us on the point because his simulations of the effect of a fall in real wages—both his verbal discussion and also his use of the Treasury model—combines the fall with a tightening of policy which reduces the PSES, holds interest rates constant and maintains the existing real exchange rate.

Whatever the result of such an exercise, however, it is not particularly useful because it is hard to imagine any government including the present one, which would not be keen to expand demand if it could be sure that there was enough wage flexibility to allow a worthwhile increase in output. The practical problem, then, is to make some assessment of the degree of flexibility in the economy today and hence of the relative sizes of the costs and benefits of an increase in demand.

Letters to the Editor

Taxes and pensions

From Dr D. Brown

Sir—I am concerned that the Government should apparently be contemplating a number of changes in the way in which pensions are treated for tax purposes. These changes will affect a wide range of people but are concentrated within the groups whose interests, the Government, most affects to protect.

In 1988 Norman Fowler started an enquiry into the transferability of pensions. Much of the discussion at that time highlighted many public (and Governmental) misconceptions as to what was fair when employees transferred their pension entitlement from one employer to another. In brief many, including apparently, Mr Fowler, seemed to believe that "fairness" was represented by a transfer of years of service: this is not the case! It is not the case because there are manifest differences between company pension schemes. The first and most obvious difference may be the accrual rate (eg 1/60 per year of service) other clear differences may exist in widows' pension rights, etc. Such differences however ignore what is probably the most significant aspect, that the security of the promises which are made to employees on company schemes. The promises may look the same but are based on different funding assumptions. There are schemes where weak funding assumptions have already reduced to fulfilling only the minimal promise—pensions have been frozen! The effects of this can be seen by considering a 5 per cent inflation rate—this would reduce real income to 78 per cent in five years and a mere 61 per cent in 10 years.

After some debate the Government dropped its initial suggestions on transferability and commissioned "a consultative document." This was published in July 1984. The document itself is very bland and says little and it is its failure to be explicit which I find disturbing. It is disturbing because it fails to address any issue in detail and hence appears innocuous. This could well be far from the case. Hence the need to be explicit. The second point which gives me great cause for concern is the suggestion that the Chancellor may be considering changes in the tax concessions

Reconstruction in the High Street

From the Chief Executive, International Stores

Sir—I am writing concerning what I regard to be somewhat unfair aspects of your reporting of the recent acquisition of International Stores by the Debenhams Group. In particular I refer to David Churchill's news item of November 23.

Our concern is principally Mr Churchill's summary of International Stores as going "from had to worse over the last decade with poor management and little sense of direction." The current board, reformed under my lead two years ago, has much to be proud of and Mr Churchill's dismissal is damaging to their credibility as well as the utility of the proposed reconstruction.

First points of fact. Mainstop was a BAT Stores experiment, wholly separate from International's chain. International's only management role in the Mainstop interlude was the rationalisation and refurbishment of those stores which BAT Stores could not sell off at the end of the venture. Mr Churchill allows "an improvement in profitability in recent years." I would argue that a turnaround from £3.5m trading loss in 1981 to a profit of £10.3m in 1983 compares with the best rates of improvement in the grocery business. Further to this the published profits for the first half of 1984 showed a 30 per cent increase on the comparable period in 1983, so you can see that the improving trend has continued.

More importantly, by a once-off simple rationalisation. These improvements were delivered while a massive programme of refurbishment, reorganisation and redirection was under way. Two hundred stores, representing 70 per cent of International's turnover were refitted and updated in the last 18 months; a non-existent development programme was transformed from a standing start into the largest new building programme proportionate to size in the grocery trade, with 12 store openings in 1984 and over 20 lined up for 1985. Every major supermarket's objective has been increased fresh food business which we haven't been on a TV talking about it—we have radically improved the profitable fresh food share of our business. In a little over a year 650 newly designed and specified own label lines have been introduced. Moreover, International to catch up with industry averages. Improvements such as these have enabled us to attract some of the brightest young people from our own industry to enter into this reconstruction and in spite of the demands of steadily improving profitability we have invested in new talent and training more than ever before.

British TELECOM British Telecommunications plc Offer for Sale Kleinwort, Benson Limited, on behalf of the Secretary of State for Trade and Industry, announces that applications from the public for shares will be allocated on the following basis: Number of shares applied for: 200-400 shares, 800 shares, 1,200 shares, 1,600-100,000 shares. Number of shares being allocated: In full 500 shares, 600 shares, 800 shares. No allocation will be made to applicants for over 100,000 shares, and cheques submitted with these applications will not be presented. Preferential applications from British Telecom employees and pensioners for up to and including 20,000 shares will be allocated in full. Applicants for higher numbers will receive 20,000 shares each. A considerable number of multiple applications have been rejected. Letters of Acceptance and, where relevant, return cheques will be posted on Monday 10th December, 1984, or as soon as possible thereafter. Dealings prior to receipt of Letters of Acceptance will be at the seller's risk.

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FINANCIAL TIMES

Monday December 3 1984

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BLACKWOOD HODGE

Terry Byland on Wall Street A subdued celebration for bulls

THE TWELVE-MONTH anniversary of Wall Street's recent lull was celebrated last week in chastened mood. The Dow Jones industrial average ended the week 7.7 per cent below the 1,387 peak, and the stock market was shuffling downwards, pressing on the lower end of the trading range of 1,180 to 1,240 established since the summer.

Moreover, the market's unease was accompanied by a slightly bewildering array of straws in the wind. On the one hand, the board of General Motors, on the back of favourable sales trends in November, announced highly bullish views of the outlook for next year. But on the other, Mr John Templeton, of the highly successful Templeton Mutual Fund group, disclosed that his funds have shunned IBM stock because of the competitive nature of the computer industry.

Meanwhile, Wall Street, already unsettled by reports of White House frays over budget spending plans, also has to contend with the Treasury's proposed tax restructuring. The Treasury announcement has already prompted postponement of one Wall Street new issue, and heightened the atmosphere of investment caution in other ways.

Under these conditions it is hard to see the stock market catching fire. The argument that every indication of a slowdown in the economy is also an argument in favour of further easing in Federal Reserve credit policy begins to sound slightly hysterical.

Bateman Eichler, Hill Richards, points out in its latest investment summary that if the Fed is waiting to see the effects of the first round of rate cuts before trying again, then Wall Street could be disappointed. Bank prime rates have fallen from 13 per cent to 11 1/4 per cent over the past six weeks - and seem set to fall to 11 per cent, with or without another reduction in the federal discount rate - but the Dow averages has fallen by more than 17 points over the same period. So much for the much-vaunted easing by the Fed, at least as far as the stock market is concerned.

Now, just to complete Wall Street's confusion, money supply has jumped sharply and Dr Henry Kaufman warns that the Fed may stay its hand, after all.

This is still a sector stock market, with the financial sector outperforming the rest by a wide margin. Paine Webber follows the trend in recommending this sector, but includes some original twists to the theory that falling interest rates usually benefit the financial institutions before they benefit the borrowers for whom they are intended.

The firm believes that the strong rise in the savings and loans groups has outrun itself and that present stock prices for such leaders as F.H. Ahmanson, or California National Savings and Loan should only be bought by those anticipating further, and substantial, falls in interest rates.

The rise in S&L stocks reflects that balance sheets will benefit from lower rates, earnings forecasts have in fact been downgraded by several brokers in view of the slowdown in the housing industry on the back of the economic slowdown.

Paine Webber is loyal in recommending stocks in the brokerage industry which have already risen well above the rest of the market in which they fell as earnings slumped badly. In October stocks in the securities houses gained about 2.3 per cent against a background of a flat stock market. The key is the reduction in costs, largely because of the cutback in salaries and other compensation which represent 60 per cent of total expenses. Now, with bond prices strongly higher, Merrill Lynch, for example, increased earnings from principal transactions from \$59m to \$188m in the third quarter.

Some Wall Street analysts are taking a more favourable view of the money centre banks, which have been downgraded since the middle of the year. Some analysts believe that the "disaster scenario" in the Latin American loan department is now less likely. For the short term, Latin America, with the notable exception of Argentina, appear to be making progress on their liquidity problems. For those still bullish of the U.S. economy, there is the prospect that a long-term improvement in the free world economies will improve the outlook for Third World debtors.

There is a kick in the tail of the improvement in outlook, however, for the money centre banks. The U.S. regional banks which have risen strongly this year now look vulnerable to the problems of the domestic farming and energy industries revealed by Continental Illinois or First Chicago. Paine Webber is downgrading to neutral its rating of the West Coast banks.

Case-IH consolidation may take three years

BY ANDREW GOWERS AND IAN RODGER IN LONDON

CONSOLIDATION of the European farm equipment operations of J. L. Case and International Harvester will not begin for several months and might take up to three years to complete.

A Case official said yesterday at a London press conference that the overlap between the Case and IH factories and dealer networks in Europe would be eliminated and Case would probably settle on a single line of products at some point rather than maintain both brands.

Last week, Tenneco, the parent company of Case, bought IH's farm equipment businesses in the U.S. and Britain and options on its French and West German operations for \$430m.

The Case spokesman said a detailed review of all European operations, including Case's four construction equipment plants, would be carried out over the next "several months". Case would help dealers merge and, in some instances, it

would close company-owned dealerships rather than burst strong independents.

This week, Tenneco officials will visit banks in France and West Germany to seek the transfer of IH's local finance arrangements so the options to purchase those subsidiaries can be exercised.

Although Tenneco has said it would, if necessary, carry on in Europe without IH's French and German businesses, it wants them very much. IH is a leading tractor supplier in these countries, with a 14 per cent share in France and a 16 per cent share in West Germany, whereas Case itself has only minimal shares.

Moreover, Case needs the IH plant at Neuss in West Germany, which is profitable and makes engines for all IH tractors in Europe, including those assembled in Britain. Even though Case may ultimately want to use its own new engines in these tractors, the compa-

ny spokesman acknowledged yesterday that, for technical reasons, any change would be two years away.

Mr Donald Lennox, IH chairman, said at the press conference that the company's farm equipment division was heading for another \$300m loss in 1984-85 before the Tenneco deal was made. He predicted further mergers or collapses in the farm equipment industry because of depressed markets.

The Case-IH deal is bound to be the main talking point at the Royal Smithfield Show, which opens in London today. Rival manufacturers preparing their stands yesterday welcomed the move as a step towards eliminating excess capacity, but agreed it was not enough.

In the UK, tractor registrations have fallen more than 9 per cent this year; sales are down 4 per cent in money terms. Industry executives are bracing themselves for another dull year.

Test crash a setback for ICI fuel additive

By Elaine Williams in London

ICI'S HOPES to introduce a revolutionary fuel additive to prevent lethal fires from engulfing crashed aircraft on impact will be set back by at least a year after the apparent failure of a spectacular test crash over the weekend.

The \$11.7m crash on an airstrip in the Mojave desert in California, paid for by the Federal Aviation Administration (FAA) and the National Aeronautics and Space Administration, was supposed to prove that ICI's Avgard additive could reduce the risk of fire. Instead, the aircraft was engulfed in flames and ICI researchers will spend the next few weeks trying to find out what went wrong.

Mr David Lane, ICI's product manager, who saw the test, said: "Despite the outcome of the test, we will be stepping up our commitment to the programme."

If that crucial test had proved Avgard's effectiveness, the FAA planned to issue a "Notice of Proposed Rulemaking". That is an important step in making compulsory the adoption of safety systems in aircraft. The FAA has not ruled out the possibility of issuing such a notice despite the outcome of the test.

Saturday's test was just one of many increasingly severe tests Avgard has undergone since 1978. Four controlled crashes of obsolete U.S. Navy Neptune aircraft mounted on high-speed tracks have taken place but none was carried out on an airborne aircraft coming into land.

A disaster on the ground at Tenerife Airport in 1977, when two jets collided, showed the danger of fire in potentially survivable crashes. The fire bared once when fuel escaping from ruptured tanks forms an explosive mist which can be easily ignited with sparks from broken metal pieces scraped together.

ICI Chemicals has spent more than \$11m and 17 years on the development of the fuel additive, with hopes that the market for Avgard would be worth more than \$1bn a year.

The company came up with a polymer codenamed FM-9, which, when mixed with a "carrier fluid", forms the Avgard additive. When added to jet fuel, it creates an anti-knock additive, ICI and the Royal Aircraft Establishment at Farnborough discovered that fuel misting was reduced or prevented when a high-molecular-weight polymer was dissolved in kerosene.

Preventing the mist forming would stop engines working, as all aerodynamic function by turning fuel into a fine mist which is sprayed into a combustion chamber and ignited. So designers have added to the fuel line supply an extra piece of equipment called a deaerator, which negates the effect of the additive just before the fuel enters the combustion chamber.

The test did not go as planned. Engineers had designed the test to be potentially survivable with the Boeing 730 climbing to an altitude of 2,300 ft before being brought down by radio control to about 150 knots to crash-land with its undercarriage up. The fuel tanks in the wings were to be broken by obstructions in the ground and then exposed to ignition sources in the form of three sets of landing lights. The fuselage was to remain intact.

However, one wing was broken on landing but the fuselage penetrated by the runway obstacles ruptured the tanks under the fuselage. A large fireball erupted on impact and was then followed by a secondary fire, which caused considerable damage to the passenger cabin. This may therefore not be a valid test for Avgard.

Mr Lane said: "We had maintained all along that there would be flames from engines as they burned, spilling fuel, and also small fireballs behind the aircraft. The plane was to have slid away from these but it appears not to have done so."

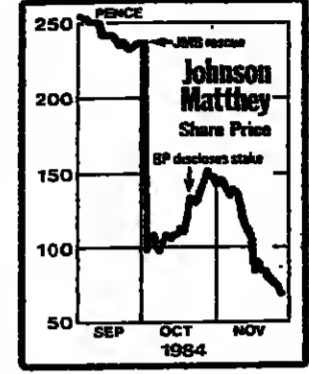
U.S. officials have yet to pass judgement on the additive, which they said had extinguished an initial fire on board the airliner.

Kuwait stock market

AN article in Friday's FT about the Kuwait Government's decision to set up a committee to consider the country's stock exchange problems stated erroneously that the present crisis in the stock market could lead to political instability. This should have read: financial instability. We regret any embarrassment caused by this error, which was made during the processing of the story in London.

THE LEX COLUMN

Johnson Matthey passes the hat



The unfortunate shareholders of Johnson Matthey have had a thorough grounding in the matter of risk capital - and a few other things besides - over the past two months and will be attending another class on the subject this week. At Thursday's extraordinary general meeting they will be asked to approve a £25m capital injection for the company. The outcome of the vote is not in serious doubt, since the alternative to approval is too horrible to contemplate. Having cleared the way for a capital reconstruction, a great many shareholders may then be tempted to vote with their feet on taking up the offer. After the astonishing developments of the past few weeks, that would be a quite natural reaction. But it would also be mistaken.

The commercial argument for subscribing does not look overwhelming on paper. By Friday evening the Johnson Matthey share price had sunk to 88p, only 12p clear of an effective issue price which as recently as a fortnight ago looked to be in the bargain basement category. The downside risk, even at 88p, is material. Johnson Matthey in its present form is as good as bust - the debt/equity ratio is about 160 per cent on fairly cautious assumptions - and the offer document itself is larded with warnings about further provisions and calls on capital.

Those warnings are not to be taken lightly, in its last annual report, JM stated solemnly that it had withdrawn from the finished jewellery market in the U.S. and had disposed of its stocks and other assets there. Yet, in the dismal interim statement accompanying the offer document, the company provided a further £10.8m against the cost of closing the U.S. jewellery business. Johnson Matthey is not a reliable investment.

Not is it likely to provide much by way of dividends to ordinary shareholders. Any payment must first be approved by the bank creditors; taking £250m as a base load of debt, JM's annualised interest costs will be around £27½m. Even taking a charitable view of the trading potential, that will not leave much for distribution.

But, if the Johnson Matthey saga has exploded any particular theory, it is that of efficient markets. The shares were, in retrospect, ludicrously overvalued just before the collapse of the banking division and there is no reason to suppose that they are correctly priced now.

Both Charter Consolidated and British Petroleum have a vested in-

terest in seeing the share price lower. Charter stands to pick up any spare stock as underwriter, which could theoretically lift its stake in JM to 46 per cent. BP, meanwhile, has declared its interest in making an offer for JM and cannot therefore be regretting the slide in the price.

Last week saw persistent and heavy selling of JM equity, apparently through one jobber. There was no reason to connect the sales with either Charter or BP but the dealing was certainly not unhelpful to their cause.

To complicate matters further, BP is awaiting information from trading partners of JM, notably Rustenburg Platinum for whom JM sells the metal outside the U.S. This information has not so far been forthcoming. Rustenburg has connections with the Oppenheimer group of companies, which in turn has connections with Charter and, through it, with JM. All in all, the market would not have been astonished to learn that last week's selling emanated from South Africa.

The conflicts of interest do not end there. The present chairman of JM is also the chief executive of Charter and his letter to JM shareholders, while accurate in every particular, should be viewed in that light. It may be that the letter, like the share price, takes an unduly dismal view of the company's prospects.

JM does, after all, sport several significantly profitable businesses, not least chemicals and refining. While there is little doubt that the group will require a further injection of capital, asset disposals and stock shrinkage could contribute mightily to the restoration of the balance sheet. New management could contribute in equal measure to the rehabilitation of the revenue account.

But, artificial or not, today's premium should ensure that anyone who has been allotted shares can exit with a tidy profit. Taking the most extreme example, an applicant for 100,000 shares will require dealing costs and interest less on the cashed cheque if the shares rise only to 82p in partly-paid form. There should be enough hungry buyers around this afternoon to see that target exceeded by a wide margin.

Assuming that the auditors uncover no further horrors, JM's fully-diluted net asset value should on paper be at least £1 per share, while on the same basis earnings for the present year should exceed 8p per share. Either way, the 56p conversion price hardly looks expensive, particularly as shareholders enjoy the short-term protection of an 8 per cent coupon on the preference stock. And the valuation takes no account of either a bid from BP or the use to someone else of tax losses in the order of £200m.

No one emerges with any credit from the Johnson Matthey affair. That the directors failed to exercise proper stewardship goes without saying; the JMB collapse showed up serious shortcomings in the Bank of England's supervisory methods, while Charter Consolidated demonstrated the limited value of 30 per cent holdings, even when accompanied by "national boardroom clout". The institutions, meanwhile, clearly acted too late in protecting their investment. It would be regrettable if, by failing to take up their rights, ordinary shareholders succeeded in making this run also even runner.

Telecom

Kleinwort, Benson has cheerfully routed the steps through the simple straggle of allotting no more than 800 shares in Telecom to anyone and depriving the really heavy applicants of any equity at all. This basis of allotment has the virtue of simplicity and also ensures the widest possible distribution. But it will leave the unsatisfied subscriber searching very hard for sellers when dealings begin this afternoon.

New private investors will be keen to sell until their allotment letters arrive and the high priorities of bonus applicants suggests that most new shareholders are keen to retain Telecom as a long-term investment. Wall Street is the most obvious source of paper but it is unlikely that the transatlantic traffic will be heavy enough to meet the pent-up demand in the UK.

But, artificial or not, today's premium should ensure that anyone who has been allotted shares can exit with a tidy profit. Taking the most extreme example, an applicant for 100,000 shares will require dealing costs and interest less on the cashed cheque if the shares rise only to 82p in partly-paid form. There should be enough hungry buyers around this afternoon to see that target exceeded by a wide margin.

Europrogramme faces failure as shareholders call for repayment

BY ALAN FRIEDMAN IN LUGANO

EUROPROGRAMME, the troubled L1,000bn (\$925m) Lugano-based property fund controlled by Sig Orzio Bagnasco, the Italian financier, may have to be liquidated next spring if a solution to its problems cannot soon be found.

The fund is the flagship of an international network of property, tourism and financial companies controlled by Sig Bagnasco, the Genova-born entrepreneur who also owns the Ciga chain of luxury hotels. The network has a stated net worth of \$1.5bn.

Since 1989 a total of 75,000 shareholders, almost all Italian, have bought the unquoted but redeemable Europrogramme shares. Many of these were sold door-to-door in Italy, a practice which, although not illegal, has been criticised by several prominent Italians.

Sig Bagnasco, in his first public comment on the fund's difficulties, said that if the Italian parliament

does not pass a law enabling him to convert the fund into a quoted company on the Milan bourse, it is quite possible that it will have to be dissolved.

That is because of claims by several thousand shareholders who are demanding immediate redemption of their unit trust certificates.

Conversion to a quoted company would offer shareholders a chance to trade their shares, while liquidation would result in Sig Bagnasco having to sell Europrogramme's property holdings when the Italian property market is depressed.

Claims by shareholders at present total about L750n, against Europrogramme's L300n of liquidity.

Over the past few months the number of shareholders demanding redemption has increased dramatically amid fears about the value and liquidity of the fund.

Sig Bagnasco's fund has been told by the Swiss authorities that

because of this situation, no redemptions need be executed until next March. After that the fund could well be liquidated in the face of mounting demands and far too little available cash.

Sig Bagnasco, who is facing criminal investigations in Lugano and Milan as a result of complaints to magistrates by shareholders from his fund, said he was pessimistic about the chances of the Italian legislation being passed in time to avoid liquidation.

The 57-year-old financier declined to specify as to who was behind the "series of incredible allegations" against him. He maintained that there were "personal and political issues here".

Legislation, which would allow Europrogramme to "Italianise" its Swiss property fund and thus offer its shareholders the chance to trade the shares on the Milan bourse, was stopped by the Italian Treasury Ministry on November 6.

UK miners face funds threat

BY PHILIP BASSETT, LABOUR CORRESPONDENT, IN LONDON

BRITAIN'S National Union of Mineworkers will today decide whether to maintain its defiance of the courts as renewed legal efforts are made to take control of its finances.

The NUM's executive committee, meeting in emergency session in London last night, decided to recall for this afternoon the union's special delegate conference. The delegates will decide whether to comply with the courts following the failure of the union's appeal against the appointment of Mr Herbert Brewer as a receiver to take over the financial running of the union.

Shifting the responsibility for a decision on the court orders, which were made as a result of legal actions brought by working miners, to the left-dominated special conference looks like a partial victory for NUM president Mr Arthur Scargill and the strikes leadership over an executive now thought to be deeply divided over whether to continue

the union's defiance of the courts.

Previous delegate conferences have consistently supported the leadership's position and maintained the strikes in the face of all odds, and a similar decision today must be possible.

Mr Scargill put great emphasis on the fact that the union's executive was acting after taking legal advice. The union's lawyers attended the executive meeting, together with Lord Wedderburn of Charlton, a leading labour lawyer, and senior legal experts from the Trades Union Congress (TUC).

The TUC is advising its affiliated unions that it is not against TUC policy to attend court hearings or pay contempt of court fines, such as the NUM is facing.

There is a possibility that, on legal advice, the conference might decide to comply with the court in order to avoid the receivership order being kept in force.

Mr Scargill last night stressed

the seriousness of Mr Brewer's appointment. He said that it posed "the most fundamental threat to every trade union in the country as well as putting at immediate risk the very existence of the NUM."

He said that the decision to appoint a receiver for the first time in the history of the British trade union movement "threatens us with the situation in which it could become almost impossible for the National Union to carry out its day to day operations to service the membership," which it is required to do under its own rules.

In the light of the failure last night of the NUM Executive to make a clear decision on the high court's rulings, it seems likely that Mr Brewer will today make a fresh attempt in Luxembourg to take control of the £4.63m (\$5.7m) of the central NUM's funds held in an account at Nobis-Finanz International, a Luxembourg bank.

Recovering union funds, Page 8

London bank adviser for Hong Kong

BY DAVID DODWELL IN HONG KONG

AN ADVISER, from the Bank of England's banking supervision department has been appointed to Hong Kong's banking commission. The move caps a number of recent changes in the British territory to tighten regulation of its banking and securities industries.

No official announcement has yet been made about Mr Richard Farrant's two-year appointment as adviser to Hong Kong's banking commissioner. The appointment has been made at the Bank of England's suggestion and follows criticism of Hong Kong's banking practices by a special Bank of England team early

this year. Scandal has surrounded the collapse of several financial institutions in Hong Kong in recent years.

A month ago, Mr Robert Fell, a former chief executive of the London Stock Exchange who was appointed Hong Kong's securities commissioner in 1982, was appointed banking commissioner. Although Mr Fell is widely respected in the territory, some concern was expressed at his appointment because he has had no previous professional experience in the banking industry.

One senior government official

said yesterday: "Robert Fell has enormous experience in the financial field, but will willingly admit himself that he is not a banker. Richard Farrant will underpin him in this respect."

He added that the Hong Kong Government was determined to strengthen supervision of the local banking sector, albeit "steadily and calmly."

Criticism of Hong Kong's banking commission has mounted over the past year, with scandals surrounding the collapse in 1982 of Dollar Credit, a local deposit-taking company (DTC).

Poll setback for Hawke

Continued from Page 1
voters, who intentionally filled their ballot papers in wrongly, "both over Mr Hawke and some of his more incoherent programmes."

Although damaging to Mr Hawke's authority, the result is unlikely to provoke any alteration in government policies. Mr Hawke said yesterday he was unlikely to make major cabinet changes, or to give it a more left-wing flavour.

On the other hand, the result has revitalised Mr Peacock's and the Liberals, who have now firmly set their sights on dislodging Labor at the next election.

World Weather		C		F	
Amsterdam	C 10 F 50	Bombay	C 25 F 77	London	C 12 F 54
Atlanta	C 18 F 64	Calcutta	C 28 F 82	Madrid	C 15 F 59
Bombay	C 25 F 77	Delhi	C 32 F 90	Mumbai	C 22 F 72
Buenos Aires	C 15 F 59	Hong Kong	C 25 F 77	Paris	C 10 F 50
Calcutta	C 32 F 90	London	C 12 F 54	Rangoon	C 28 F 82
Delhi	C 32 F 90	New York	C 5 F 41	Singapore	C 28 F 82
Hong Kong	C 25 F 77	Tokyo	C 15 F 59	Sydney	C 22 F 72
London	C 12 F 54	Washington	C 10 F 50	Taipei	C 25 F 77
Madrid	C 15 F 59	Wellington	C 15 F 59	Yokohama	C 15 F 59
Mumbai	C 22 F 72	Manila	C 28 F 82		
Paris	C 10 F 50				
Rangoon	C 28 F 82				
Singapore	C 28 F 82				
Sydney	C 22 F 72				
Taipei	C 25 F 77				
Tokyo	C 15 F 59				
Washington	C 10 F 50				
Wellington	C 15 F 59				
Yokohama	C 15 F 59				

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SECTION II - COMPANIES AND MARKETS

FINANCIAL TIMES

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Euroyen issue rush may lead to severe case of indigestion

THE DAWN of a whole new era breaks today in the Euroyen market with the official opening of the Euroyen bond market to non-Japanese corporate borrowers and government agencies.

Last week saw a frenzy of activity in both the bond market and certificate of deposit market which has also been liberalised from this week. There are now six new bond issues totalling nearly £120bn under starters orders, and as is often the case with novelties, most have been well received by investors.

Market behaviour, though, is already enough to set some bankers thinking. Have new issue managers in the horn again, yen market already committed the original Euroyen bond sin of glutting? In other sectors feast can quickly be followed by famine as investors get indigestion.

One reason for concern about such a large new-issue volume is that there is relatively little attraction to international investors in putting their money in yen. It is a currency that carries a low interest rate - most of the new issues yield about 7 per cent or slightly lower - and has little scope for appreciation against the dollar so long as capital exports from Japan continue to run at a high pace.

For the time being, however, such thoughts are evidently not uppermost in the minds of investors, least of all those who regard currency diversification as good in principle rather than just a matter of speculation. In the past it has not always been easy for these investors to find the right instrument. Domestic government issues are subject to tax, and Samurai issues (foreign bonds launched in the domestic market) are generally hard to trade.

What new issue managers are therefore counting on is a substantial pocket of pent-up demand for yen instruments that are free of restriction to buy and easy to deal. In that sense the more paper that hits

IF EVER there was an occasion for the Euroyen market to rely on its often overworked rumour mill, Friday's announcement of a \$1bn note facility for Nestlé was it.

The facility, first mooted 10 days ago, was down-played by Nestlé last Tuesday when Herr Helmut Manoyer, managing director, said it was on ice until the U.S. Federal Trade Commission ruled on the group's proposed takeover of Carnation. With great fanfare, the facility was suddenly launched late on Thursday night.

It is not as if Nestlé had much to be shy about. Not only is the facility the largest of its kind yet seen for a prime corporate borrower, it also comes on predictably fine terms, although the structure is complex.

Nestlé facility ends the guessing game

Led by Credit Suisse First Boston the three-year facility replaces a \$2.5bn temporary bank loan taken out when Nestlé first announced the Carnation bid. It can be used to back up the issue of commercial paper in the U.S. or of short-term notes in the Euroyen market. Or it can be used to arbitrage between the two.

The fact that Nestlé can contemplate such arbitrage illustrates its exceptionally high standing in the Euroyen market, where borrowing is normally more expensive than in commercial paper. Bankers believe that Nestlé should be able to sell three-month Euroyen notes at a yield

some ¼ point below Libor, which would be just about on a par with the cost of commercial paper.

A facility that allows it to switch from one market to the other as relative costs fluctuate obviously thus has great appeal, but to make it an unusually large \$500m swing line that can be drawn on on a same-day basis to meet any cash shortfalls. These can arise because the payment process for commercial paper is immediate, while in the Euroyen market it takes two days.

Drawings on the swing line will bear interest at the U.S. prime with a one-basis-point fee each time a drawing is made.

The basic underwriting fee on the facility is 5 basis points whether the back-up is used or not, although so long as it remains undrawn in the first year it will only be ¼. There is a graduated scale of charges for actual use of the back-up facility, which means that any drawings will effectively yield a return to underwriters of about 20 basis points over Libor.

That means that Nestlé will pay a relatively heavy price in the unlikely event that it actually has to draw on the back-up. At the same time the underwriting commitment from banks is being provided very cheaply.

There is some contrast with the recent \$300m facility for BAT Industries, which paid no commitment fee at all on its back-up element. By contrast, Nestlé is paying an underwriting fee and in return is assured of an absolute ceiling on drawing charges. (In the BAT case, underwriters may name their own price if they are forced to bid for the notes.)

Bankers believe that the different structure is explained by Nestlé's need to demonstrate to the U.S. authorities that it has a firm commitment from its bankers to finance the Carnation deal, and a commitment for which it is paying is more plausible than one that is free. At the same time, some argue that BAT Industries might be in for a rough ride if it does ever draw on its back-up, since the price charged by underwriters might at that stage be very high.

Elsewhere, Esselte AB has mandated Enskilda Securities, Merrill Lynch and Hambros to arrange a \$100m, seven-year Euroyen note facility. As in last week's issue for Bank of Baroda, the borrower itself will determine the price of the notes, while giving underwriters guaranteed access to a certain portion.


Peter Montagnon

NEW INTERNATIONAL BOND ISSUES

Borrowers	Amount m.	Maturity	Air. life years	Coupon %	Price	Lead Manager	Offer yield %	Borrowers	Amount m.	Maturity	Air. life years	Coupon %	Price	Lead Manager	Offer yield %	
U.S. DOLLARS								D-MARKS								
Tangani Corp. \$	20	2000	16	3 1/4	100	Yamaichi Int.	3.250	Fuji Electric \$	120	1990	5	(3 1/4)	100	Deutsche Bank	-	
Sunshine Realty & Dev. \$	40	1988	5	3	100	Daiwa Int., Sunbros Fin. Int.	8.000	Enso \$	100	1982	7	7 1/4	100	WestLB	7.875	
Yamaichi Sec. \$	20	2000	16	3 1/4	100	Yamaichi Int., CSFB	3.250	East Asiatic Co. \$	100	1991	7	7 1/4	100	Commerzbank	7.750	
Yamaichi \$	20	1995	11	3 1/4	100	Yamaichi Int., Mgr. Stanley	3.250	SWISS FRANS								
Sweden \$	790	2005	28	(0)	99.31av.	Tender Sale	-	Sonitaco Realty & D. \$	130	1990	-	2	100	CS	2.000	
Nippon Electric \$	150	2000	15	(3 1/4)	100	CSFB, Yamaichi Int., Daiwa, SBCI	11.875	New Zealand Steel \$	60	1996	-	(7 1/2)	100	Bge Getzwiller K.B.	5.784	
Sarwa Int. Fin. \$	150	1992	7	11 1/4	100	Mgr. Stanley, Sarwa Int., CSFB, Kidder Peabody, Mgr. Guaranty	12.237	World Bank \$	100	1994	-	5 1/4	99 1/2	CS	5.500	
Amca Int. (d) \$	50	1998	15	12 1/4	99 1/4	Orion Royal Bank	11.875	EB \$	60	1982	-	5 1/4	100	Citibank (Switz)	5.875	
Kellogg Co. \$	100	1992	7	11 1/4	99 1/4	Goldman Sachs, Deutsche, UBS (Secs)	11.277	City of Tokyo \$	80	1994	-	5 1/4	99 1/2	SBC	5.316	
Kellogg Co. \$	100	1999	5	10 1/4	99 1/4	Goldman Sachs, Deutsche, UBS (Secs)	11.277	Obor. Kraftwerke \$	100	1994	-	5 1/4	100	UBS	5.376	
Overseas Dev. Auth. \$	100	1985	5	11 1/4	100	Deutsche, UBS (Secs)	10.889	Gillette Co. (a) \$	100	1994	-	4 1/4	100	Sedific	4.750	
EEC \$	100	1990	5	11 1/4	100	CSFB, Deutsche, Merrill Lynch	11.375	Sasha Co. \$	35	1999	-	(2 1/4)	100	Wirtschafts- und Prk	-	
Household Fin. Corp. \$	100	1992	7	11 1/4	99 1/4	Mgr. S.G. Warburg	11.125	First Boston	60	1994	-	(5 3/4)	-	CS	-	
Trust S&L \$	1200	2010	26	9	5.995	Goldman Sachs, Deutsche, Prudential, Bache, Bge Paribas, Bear, Stearns, Swiss Euro., Dresd	11.706	Toto Chemical \$	30	1999	-	3 1/4	100	UBS	3.750	
US Treasury \$	1000	1980	5	11	99.827	Tender Sale	11.252	IBAF \$	300	1997	-	4 1/2	100	SBC	4.500	
American Brands \$	100	1987	3	11	100	Mgr. Stanley	11.800	STERLING								
CANADIAN DOLLARS								Korea Exchange Bank (a) \$								
World Bank \$	100	1995	8	(0)	-	-	-	World Bank \$	100	1994	10	1/4	100	Mtn. Hannover, Schroder, Baring Bros., LBI	-	
LTCB \$	75	1990	5	11 1/4	100 1/4	Wood Gundy, McLeod Young Weir	11.810	World Bank \$	50	1989	5	10 1/4	9 1/4	99 1/2	Baring Bros.	10.602
New Brunswick \$	75	1995	10	12	100 1/4	Wood Gundy, CSFB	11.912	World Bank \$	50	1994	18	11	99 1/4	Baring Bros.	11.043	
AUSTRALIAN DOLLARS								World Bank \$								
James Hardie \$	30	1989	5	13	100	S.G. Warburg	13.000	World Bank \$	50	1991	7	1/4	100	Citibank, S.G. Warburg	-	
NEW ZEALAND DOLLARS								EURO								
Dunlop Olympic \$	25	1990	5	15 1/4	100	Hambros Bank	16.750	Spain	100	1995	8	(0)	-	Anno	-	
D-MARKS								EEG \$								
South Africa \$	250	1992	9	7 1/4	100	Deutsche Bank	7.750	EEG \$	200	1996	7 1/2	9 1/4	99 1/2	Bear, Stearns, First Boston, Mgr. Stanley	8.948	
UBS Finance \$	200	1991	7	3	100	Dresdner BK, UBS (Secs)	3.000	Credit National \$	50	1994	19	10 1/4	100	BNP, Kreditbank Int.	10.375	
Unile Int. \$	150	1994	10	3 1/4	100	Deutsche Bank	3.125	Heron Int. (a) \$	40	1991	7	1/4	100	Bge Indosuez, DBL, Deutsche, LBI, Mgr. Stanley	-	

Peter Montagnon

* Not yet priced. † Fixed terms. ** Private placement. † Convertible. ‡ Floating-rate note. § With debt warrants. ¶ With equity warrants. (a) 1/4 over 3-month Libor. (b) 1/4 over 6-month Libor. (c) 0.45% + 3-month T-Bill rates, reset monthly. (d) Coupons reset after 5 yrs. (e) Dual-currency. (f) Spread over average yield on Sw. Govt. bonds, with maturities of 5 yrs or more, netted after 6 yrs. (g) 1/4 over 6-month Libor. (h) 1/4 over 3-month Libor. (i) Equal to Libor. †† Registered with U.S. S.E.C. Note: Yields are net on AMD basis.



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November, 1984

INTERNATIONAL CAPITAL MARKETS

U.S. MONEY AND CREDIT

M1 jump dashes hopes of Fed relaxation

THE INITIAL euphoria in the bond markets following the previous week's half-point cut in the U.S. discount rate has soon disappeared and there is a growing feeling that perhaps the recent sharp drop in U.S. interest rates has largely run its course.

Table with columns: U.S. MONEY MARKET RATES (%), U.S. BOND PRICES, and Yields. Rows include Fed Funds, Treasury bills, Treasury notes, and various bond types.

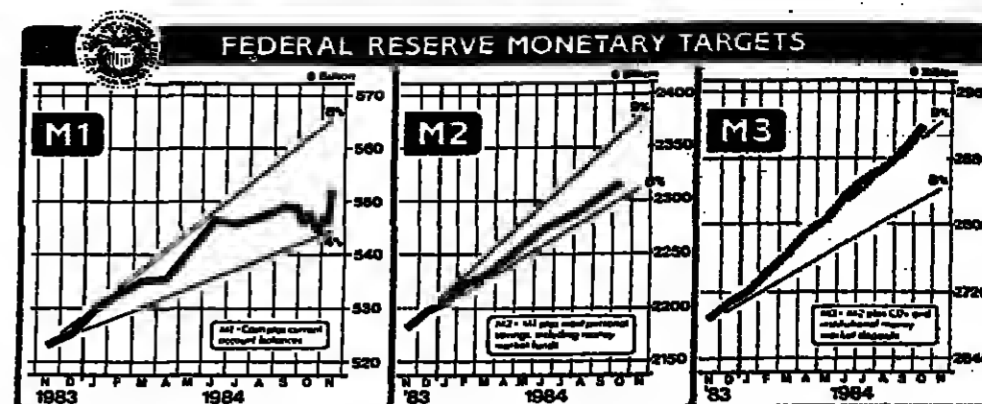
For most of last week U.S. bond prices drifted lower but the news of a surprise \$6.7bn jump in M1 led to a sharp drop in long-term bond prices late on Thursday. The markets generally concluded that the jump in money supply—more than three times the increase expected—had dashed hopes of any further easing in the FED's monetary policy in the short term.

Many economists believe that U.S. prime rates will be 11 per cent or lower by the turn of the year and Bank of America's chief economist, Mr John Wilson, has predicted that rates will fall to 10 per cent by mid-1985.

While prime rates still have some way to go to catch up with the recent sharp fall in U.S. money market rates, analysts are now wondering whether there is much more scope for lower short-term money rates, especially after last Thursday's surprise jump in the money supply.

Mr Irwin Kellner, Manufacturers Hanover Trust's chief economist, is one of several leading economists who argue that the jump in money supply plus the recent sharp drop in short-term interest rates is sufficient to restart the U.S. economic engine, if indeed it has stopped.

Dr Henry Kaufman, Salomon Brothers' chief economist, says that the Federal Reserve is likely to view the latest rise in the money supply with relief and will keep credit policy steady until there are clear signals about the economy's direction.



out little comfort. The index of leading economic indicators for October was down 0.7 points, the third fall in the last five months of the closely watched barometer of the U.S. economy's future health.

Whereas the Fed had been thinking that the economy would grow by between 3 per cent and 4 per cent in the second half of 1984, most economists now believe that it is growing considerably slower.

UK GILTS

Yields pattern set to change again

DECLINING U.S. bond yields, since the Federal Reserve relaxed its credit policy in early September, have not been fully metched by falls in the yields on UK gilts. Since August 31, U.S. 20-year Treasury bond yields have dropped by 120 basis points. Their UK equivalents have eased back by only 50 basis points over the same period.

The relative positions of the UK and U.S. on inflation and the budgetary outlook have been reversed in the course of this year. Now, with the U.S. economy sliding and inflation still at 4 per cent, there is the prospect of weakening prices in many U.S. production sectors.

By the early months of this year, by contrast, the UK was seen to be substantially better placed than the U.S. in terms of budgetary control and possibly also with regard to inflation prospects. The UK budget deficit, as a proportion of GDP, had been brought down to around 3 per cent, while the U.S. deficit had mounted to words 6 per cent of that country's GDP.

On inflation, the hope in the UK was that the Government, having brought the rate down to 5 per cent, would press on to achieve a 3 per cent rate or even price stability. In the U.S., where inflation was already in the 3 to 4 per cent area, there were fears that rapidly approaching capacity constraints would drive the rate up to 6 per cent, 7 per cent, or even 10 per cent within 18 months.

measures to curb the deficit to 2 per cent of GNP by 1985. Although Congress is likely to take time fashioning a deficit-curbing package, there is now a wider political consensus than there was in the year leading up to the election that action on the budget is needed.

In the UK, on the other hand, the public sector borrowing requirement is overrunning the Government's original forecasts, which points to the unavourable underlying trends in public sector finances. Given the UK Government's increasing sensitivity to unemployment, corrective action is unlikely to be taken to deal with these trends.

The conclusion is that there are strong grounds to expect UK yields to adjust upwards relative to U.S. yields. If U.S. yields continue to fall, this upward adjustment may well be consistent with stable or rising UK gilt prices. Nevertheless, there is likely to be considerable resistance to UK yields following U.S. yields down.

Stephen Lewis Phillips & Drew

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INTERNATIONAL CAPITAL MARKETS AND COMPANIES

CORPORATE FINANCE

Saint Gobain shows strength of the Ecu

THE EUROPEAN currency unit has been increasingly hitting the headlines as a financial tool for bankers, borrowers and money dealers. One man who believes that the Ecu, having established itself as a unit of value on international financial markets, is now moving towards use as a transaction currency in commercial operations is M Jacques Pillet, treasurer at Saint Gobain.

M Pillet should know. Saint Gobain, the French state-owned conglomerate with activities ranging from glass-making to pipes and construction, has been one of the pioneers in promoting use of the Ecu in the corporate treasury field. Saint Gobain, with only 34 per cent of its roughly FF760bn turnover actually in France (15 per cent represents exports

from France and 51 per cent sales by foreign production units), has been long-exposed to the blustery winds of exchange rate fluctuations. As part of a drive to bring in an internal accounting system resistant to undue changes in exchange rates, the company in 1981 started to denominate internal group transactions in Ecu. In 1983, in line with the growth of Ecu trading facilities available from the banks, it started to use the Ecu as a transaction currency. Now the time may have arrived for more outside clients of Saint Gobain to start using the Ecu, too. The group's annual Ecu transactions currently total only around FF7 500m, mostly representing sales and purchases by subsidiaries. But judging by the interest

now being shown by other companies—at first slow to change their habits—FF7 1bn-1.5bn of Saint Gobain's business next year could be denominated and settled in Ecu, Mr Pillet says. "1984 has been the most important year for the use of the Ecu in financial operations; 1985 could be the year when it makes an impact in the commercial field, too." Important state clients—such as East bloc and Middle East countries—are also developing more interest in Ecu deals, he says. Saint Gobain's use of the Ecu on the financial markets has accompanied the gradual winning of acceptance of the unit as a way to denominate bond issues and credit deals over the last few years. Including an Ecu issue of non-voting loan stock (titres participatifs) earlier

this year, the company now has Ecu 250m in Ecu bonds or outstanding, plus an additional Ecu 100m which could be subscribed in the future as a result of warrants attached to existing issues. Adding several hundreds of millions of Ecu in outstanding credit lines with banks, Ecu borrowing makes up about half the group's foreign debt. M Pillet, who is also chairman of the French corporate treasurers' association, says that the Ecu now holds its own in currency trading alongside dollars, Deutschmarks and sterling. As a mark of sophistication, four to five-year cover in Ecu is available on the forward market, he says. Whereas in 1982 or 1983 Ecu trading was relatively limited, Saint Gobain now feels happy dealing in Ecu with all the

Bayerische Hypotheken earnings improve

By Jonathan Carr in Frankfurt
THE Bayerische Hypotheken und Wechselbank of Munich has joined other leading West German banks in reporting an earnings improvement since mid-year. The Hypo-Bank said its partial operating profit, which includes interest and commission earnings less personal and other expenses, was down by 8.5 per cent in the first 10 months to DM 533m (\$190.6m). In the first half the cut had been 14 per cent. The interest surplus in the first 10 months dropped by 2.3 per cent to DM 1.2bn, while the commission surplus rose by 8.3 per cent to DM 179.5m. The bank did not specify its full operating profit, which includes the results of trading on its own account. It expected a "satisfactory result" for the year as a whole, however. Berliner Handels und Frankfurter Bank has announced partial operating profit, excluding trading results, of DM 101m in the first 10 months against DM 99m for the same period in 1983. The interest surplus for the 10 months was marginally higher at DM 183m from DM 175m in 1983, and commission surplus rose by DM 1m to DM 84m.

INTERNATIONAL APPOINTMENTS Board sackings for Continental Illinois

BY WILLIAM HALL IN NEW YORK
THE Federal Deposit Insurance Corporation (FDIC), which rescued CONTINENTAL ILLINOIS from near failure earlier this year, is sacking more than half of the board of the troubled Chicago Bank. Continental is expected to announce shortly that most of its directors will not stand for re-election at next year's annual meeting. Continental's board of directors has always been one of the most prestigious of any company to the mid west. Mr James Bere, chairman and chief executive of Borg-Warner, Mr Robert Malott, chairman of FMC, and Mr William Johnson, chairman and chief executive of IC Industries, are among those who will not seek re-election to the Continental board. When the FDIC rescued Continental last summer it replaced the bank's two senior executives and said that the board would be substantially restructured as soon as possible. It asked all board members to tender undated resignations. The banking community had expected a new board to be appointed as soon as possible, but it is understood that the new management team at Continental, headed by Mr John Swearingen and Mr Bill Ogden, have been opposed to the sweeping reorganisation of the bank's board because they will find it hard to find replacements of the same calibre.

Singapore trading group closes doors

By Chris Sherwell in Singapore
CHOP HOO THYE, a long-established Singapore trading company best known for its line in canned sardines, has closed its doors and owes an estimated \$810m (U.S.\$466m) to local and foreign banks. The family-run company stopped trading on Friday in what bankers are calling the biggest crash of a private business since Lee Wab Cane Furniture, another local group, collapsed last year, owing about \$550m to two dozen banks. The affair has raised questions about the way local banks indulge in "name lending" to customers on the basis of personal guarantees, and has drawn attention to the ease with which borrowers can tap several banks independently for large sums of money. Inevitably it has also quickly revived calls for the establishment of a central credit information bureau in Singapore. The company is an import export concern dealing mainly in canned food stuffs. Its warehouse and offices shut on Friday after bank creditors were sent letters saying their loans could not be repaid. The reasons behind the apparent collapse are not clear, and the names of the banks involved have not been confirmed.

Restructuring at Neue Heimat

BY RUPERT CORNWELL IN BONN
A SWEEPING restructuring has been unveiled at Neue Heimat, the long-troubled West German property group — largely to help its development subsidiary, Neue Heimat Städtebau (NHS), cope with further estimated losses of between DM 90m and DM 100m (\$32m) for 1984. The deficit follows one of DM 125m run up in 1983, and comes on top of the total of some DM 1bn which the West German trade union movement, as ultimate owner of Neue Heimat, is reckoned to

have had to pump into NHS between 1981 and 1983. At the same time NHS is being converted from a limited liability into a joint stock corporation. This will enable the 1984 losses to be covered by a capital increase and subsequent capital write-down. The main source of the financial difficulties of the concern, which in 1983 blew up into a scandalously embarrassing loss, the German union movement, remain its overseas operations, in particular in Latin America. However, costly

NHS developments in Paris and Monte Carlo have now been sold, easing its financial position. Meanwhile, the 17 member unions of the DGB, the main union confederation here, have withdrawn as direct shareholders of Neue Heimat Gruppe, the parent concern. Their previous 41 per cent stake in the DM 60m capital of NHS will be transferred to the union's joint holding company, BGAG, in the process lifting the latter's holding in NHG to 98 per cent.

Shipowners count cost of Irish collapse

By Andrew Fisher, Shipping Correspondent
THE COLLAPSE of Irish Shipping, the state-owned company for which liquidation proceedings start today, could lead to losses of more than \$100m in future charter payments for Far Eastern shipowners, said Mr Frank Chao, president of the Wah Kwong shipping company in Hong Kong. He returned to the colony at the weekend, after three days of talks in Dublin to try to put together a rescue package. However, Mr Jim Mitchell, Ireland's Minister for Communications, declined to see Mr Chao and other delegates. Mr Chao said on Saturday that the five Asian companies which chartered nine vessels to Irish Shipping had offered to accept only 157.5m (\$37.5m) in place of the charter, which were due to stretch up to eight years. Legal action was being considered if an amicable deal could not be reached. The Irish Government estimated that continuation of the charter of seven of the bulk carrier vessels — two were bought by Irish shipping earlier this year for \$42m — would have cost about 155.5m, representing the difference between the ship's present charter rates and the now lower market rates.

Storage Tech plans to tap finance arm

BY LOUISE KEHOE IN SAN FRANCISCO
STORAGE TECHNOLOGY, the U.S. computer equipment manufacturer which filed for Chapter 11 of the U.S. Bankruptcy Code in October, has proposed a new reorganisation plan designed to give it a cash infusion of \$140m. The plan follows cancellation of a \$150m credit line from Chemical Bank. The new proposal comes amid unconfirmed reports in the U.S. suggesting that Storage Technology may receive an unexpected boost from its major competitor, IBM. Industry reports suggest that IBM has

placed a large order with Storage Technology for its data storage products. Neither company will comment on the reported purchases. IBM confirms, however, that its own rival data storage units are in short supply and that it has taken steps to increase shipments to customers. Under Storage's latest rescue proposal, it has asked the bankruptcy court to approve a plan under which the parent company would borrow assets from its financing subsidiary Storage Technology Finance. The parent company said

these assets consisted of about \$50m in customer accounts and notes receivable plus potential claims by the subsidiary to another \$60m of receivables in the parent company. In exchange, the subsidiary will receive a superiority claim of up to \$140m against Storage Technology. This will effectively secure the loans of Storage Technology's banks, which are owned more than 511m by the finance subsidiary. The banks are understood to have been involved in working out the plan.

Governor at Bank of Japan

By Our Financial Staff
Mr Satochi Sumita has been named successor to Mr Haruo Maekawa as Governor of the BANK OF JAPAN. Mr Sumita, whose appointment to leadership of the central bank was foreshadowed in September, when Mr Maekawa announced that he was to step down, will take office on December 17, after formal Cabinet confirmation. He has been Deputy-Governor since 1979. Mr Yasoshi Mieno, currently, a central bank director, is to take up the Deputy-Governor's post.

President for Fiat France

By Our Milan Staff
Sig Giorgio Frasca has been appointed the president of FIAT FRANCE, following the recent resignation of Sig Vittorio Chiusano. Sig Frasca has since 1980 been the vice-president and director-general of the French offshoot of the Italian motor company. Sig Chiusano, who had been with Fiat for 30 years and was also the Turin-based group's director for European Community relations, resigned to devote himself full-time to his work as a member of the European Parliament.

Avesta brings in new chairman

BY DAVID BROWN IN STOCKHOLM
AVESTA, the troubled, Swedish stainless steel concern, has appointed Mr Gannar Engman as working chairman to replace Mr Sten Wikander, in an attempt to "strengthen and intensify" its restructuring effort. Mr Wikander, who is also president of the Fourth National Pension Fund, has been involved in controversy with executives of A. Johnson and Co, the Swedish industrial and trading group which owns Avesta. Avesta was formed during the broad-ranging restructuring of the Swedish stainless steel industry. A public share offering

failed badly following a sharp downward revision by Mr Wikander of his 1984 profits forecast, which had been printed in the prospectus. Mr Engman, 55, is leaving the Billerud Forest products concern—which was taken over two months ago by Stora Kopparberg, a rival, Swedish forest products concern—where he spent six years as managing director. Under a simultaneously announced restructuring of 12 forest products group, Mr Engman will remain as non-executive chairman of a newly formed pulp division.

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October 23, 1984

UK COMPANY NEWS

RECENT ISSUES

John Moore on the start of an international broker-dealing venture. Rowak's drive for global trading

THIS MORNING, in a smart office complex near Broad Street station, one of the most ambitious alliances formed in the financial services upheaval in London will start a new bid to compete internationally with powerful overseas rivals.

Mr. Stephen Rowak, an Akroyd man, says: "I think that the traditional strengths of Rowe & Pitman perhaps have not fulfilled the customer's desires completely. While they have superb research and sales and distribution, they probably in the overseas market have lost a bit of their business to the Merrill Lynchs of this world because they have not been able to deal."

with agency and principal work. Mr. Stephen Rowak, an Akroyd man, says: "I think that the traditional strengths of Rowe & Pitman perhaps have not fulfilled the customer's desires completely. While they have superb research and sales and distribution, they probably in the overseas market have lost a bit of their business to the Merrill Lynchs of this world because they have not been able to deal."

one-stop shopping — rather than go to an American or Japanese broker — where they feel that the whole world is being surveyed and get the answers to all their questions.

U.S. benefits set up Johnson Cleaners for growth next year

BY RAY MAUGHAN

Johnson Group Cleaners is going to make profits of some £8.1m before tax in 1984, against £6.2m in 1983. And as the 39-day deadline for any forecast and property revaluation details in defence of the £4m cash bid from Nottingham Manufacturing expired, the dry cleaning chain said it is looking for "a considerable improvement" in the first half of 1985.

will pay out April a second interim dividend of not less than 15.42p per share in respect of 1984, which would bring this year's distribution up by over 50 per cent to not less than 35.6p per share.

Freshbake falls to £509,000

EFFECTS of reorganisation have had a temporary adverse impact on first-half profit from Freshbake Foods Group. And this has been aggravated by having to adopt a continuing upward revision in respect of acquisitions as one of them ran at a loss in the pre-acquisition period.

impact arising from the reorganisation coincided with higher volume generated from the new listings for the company's products. This, coupled with a continuing upward revision in raw material prices (particularly meat) will have an important bearing on the final outcome.

listings with multiple retailers. After tax £183,000 the net profit for the half year came out at £318,000 (£740,000) for earnings of 1.34p (2.67p) per share. The interim dividend is 0.6p net (0.25p) per share.

Equitable Life extends unit trust business

The Equitable Life Assurance Society, the world's largest life company in the world and the originator of traditional life assurance practice over 200 years ago, today enters fully into the world of unit trusts and unit-linked life policies.

F. H. Tomkins £3m placing

F. H. Tomkins, distributor of industrial fasteners and motor components, is raising £3m through a placing of 2.5m shares at 80p per share of the expanded equity, at 12.1p each. Tomkins shares closed at 139p up 4p on Friday.

Goodhead splits from parent in £4.5m deal

Goodhead Print Group, the printer of the Mail on Sunday cartoon supplement, has split off from its parent company, Tebcon, in a deal worth £4.5m. This is the first step towards Goodhead, a leading printer of magazines, house journals and free newspapers seeking a quotation on the Unlisted Securities Market, probably next year.

Midsummer will miss forecast

Midsummer Inns, the real ale pub chain acquired in August by Leisure Inns, has been hit by a post-summer take-over battle, said that it would miss a profit forecast made by the previous board.

Highgate & Job

Changes in the EEC regulations affecting the protein division of Highgate & Job Group are reflected in the results for the half year ended June 30 1984, and the loss has increased from £2,000 to £12,000. The oil and chemicals side moved into a profit of £18,000 (loss £12,000) while the protein division incurred a loss of £5,000 (profit £24,000).

U.S.\$20,000,000 European Asian Capital B.V.

Private Placement Guaranteed Floating Rate Notes Due 1987 Unconditionally Guaranteed by

European Asian Bank

in accordance with the provisions of the Agent Bank Agreement between European Asian Capital B.V., European Asian Bank Aktiengesellschaft and First Interstate Limited (formerly Continental Illinois Limited), dated as of 28th May, 1983, notice is hereby given that the Rate of Interest for the next six month Interest Period has been fixed at 9 3/4% p.a. and that the Interest payable on the relevant Interest Payment Date, 4th June, 1985, is in respect of US\$10,000,000 nominal amount of the notes will be US\$999.24.

Clerical Medical

15 St. James's Square, SW1Y 4LQ 01-930 5474... Executive Investment Pension Plan

Table with columns: Bid, Offer, Change. Lists various funds like Cash Fund, Mixed Fund, UK Equity Fund, etc.

Clerical Medical Managed Funds Limited

Table with columns: Bid, Offer, Change. Lists various funds like Cash Fund, Fixed Interest Fund, UK Equity Fund, etc.

Granville & Co. Limited

Member of the National Association of Security Dealers and Investment Managers 27/28 Lovat Lane London EC3R 9EB Telephone 01-621 1212

Over-the-Counter Market

Table with columns: Company, Price, Change, Gross Yield, P/E, Fully Paid. Lists various companies like Anglo-Ind. Ind., Asa, Bnt. Ind. CULS, etc.

Today's Rate 10 1/4% - 10 1/2%

3i Term Deposits

Table with columns: Terms (years), Interest % (10 1/4, 10 1/2, 10 3/4, 10 1/2, 10 1/4, 10 1/2, 10 1/4, 10 1/2).

EQUITIES

Table with columns: Issue, Price, Change, Stock, Closing Price, % Chg. Lists various stocks like Aberdeen Am Pet, Addison Comma, etc.

FIXED INTEREST STOCKS

Table with columns: Issue, Price, Change, Stock, Closing Price, % Chg. Lists various fixed interest stocks like Aberdeen 8 1/2 Gov. Un. Ln., etc.

"RIGHTS" OFFERS

Table with columns: Issue, Price, Change, Stock, Closing Price, % Chg. Lists various rights offers like Anglo-Ind. Ind., Asa, etc.

Announcements made usually last day of dealing in the stock market. Figures based on prospectus estimates. Dividend not paid or payable on part of capital; cover based on dividend on full capital. Assumed dividend and yield based on prospectus or other official estimates for 1984.

PENDING DIVIDENDS

Dates when some of the more important company dividend statements may be expected in the next few weeks are given in the following table. The dates shown are those of last year's announcements except where the forthcoming board meetings (indicated thus) have been officially notified. Dividends to be declared will not necessarily be at the amounts in the column headed "Announcement last year."

Table with columns: Date, Announcement last year, Date, Announcement last year. Lists various companies and their dividend dates.

COMPANY NEWS IN BRIEF

We have been asked to point out that the Companies Act requires a company to go public with this month and will be benefited by a placing of around 25 per cent of the equity.

BOARD MEETINGS

Table with columns: Company, Date. Lists various companies and their board meeting dates.

NOTICE OF REDEMPTION TO HOLDERS OF INDUSTRIAL BANK OF FINLAND LTD

Kuwaiti Dinars 6,000,000 7 1/2 per cent. Guaranteed Notes due 1989

NOTICE IS HEREBY GIVEN that, pursuant to the provisions of the Notes of the above-mentioned issue, Kuwait Investment Company (S.A.K.), as Fiscal Agent, has drawn by lot, for redemption on 15th January, 1985, at 100% of the principal amount thereof through operation of the Sinking Fund, Kuwaiti Dinars 600,000 principal amount of said 7 1/2% Notes due 15th January, 1989, bearing the following distinctive numbers:

Table with columns: 00001-00020, 01561-01600, 04071-04130, etc.

The Notes specified above will become due and payable in Kuwaiti Dinars at the offices of Kuwait Investment Company (S.A.K.), Mubarak Al-Kabir Street, Kuwait City, State of Kuwait, or, at the option of the bearer, but subject to applicable laws and regulations, at Citibank, N.A., 316 Strand, London WC2R 1HB and at Kredietbank S.A., Luxembourg, 43 Boulevard Royal, Luxembourg, by cheque drawn on a Kuwaiti Dinar account with, or by a transfer to a Kuwaiti Dinar account maintained by the payee with, a bank in Kuwait. From, and after, 15th January, 1985, interest on the above mentioned Notes will cease to accrue.

Notes should be surrendered for payment together with all unmaturing coupons appertaining thereto, failing which the face value of the missing unmaturing coupons will be deducted from the principal amount.

The aggregate principal amount of Notes remaining outstanding after 15th January, 1985, will be Kuwaiti Dinars 5,300,000.

KUWAIT INVESTMENT COMPANY (S.A.K.) on behalf of Industrial Bank of Finland Ltd.

Dated: 1st December, 1984

Table with columns: Govt. Secs., Fixed Interest, Industrial, Gold Mines, FT Act All Share, FT 500 Index. Lists various stock indices and their values.

FT Share Information

The following securities have been added to the Share Information Service. Apley & Co. (P. F.) Group (Section: Industrials), Ena Hill Gold Mines N.L. (Miner-Australians), Fergabrook Group (Industrials), Ireland Fresh Foods Holdings (Foods, Groceries), T & S Stores (Draper & Stores), Tysack (W.) Sons & Tarsner (Engineering).

LADBROKE INDEX Based on FT Index 917-920 (-1) Tel: 01-427 4411

NEW YORK STOCK EXCHANGE COMPOSITE CLOSING PRICES

Closing Prices, November 30

Main table containing stock prices, organized into columns with headers like '12 Month High', 'Low', 'Stock', 'Dr. Yld.', 'P/E', '100s High', 'Low', 'Open', 'Close', 'Change', 'Prev. Close'. Includes sub-sections for 'DOW JONES', 'NYSE', and 'NASDAQ'.

Closing prices, November 30

AMERICAN STOCK EXCHANGE COMPOSITE CLOSING PRICES

Table of American Stock Exchange Composite Closing Prices for November 30, 1984. Columns include 12 Month High/Low, Stock Name, Div. Yld., P/E, and Price. Rows are organized by stock name starting with A (Able, Adams, etc.) and continuing through Z (Zion, Zions).

Continued on Page 23

NEW YORK STOCK EXCHANGE COMPOSITE CLOSING PRICES

Table of New York Stock Exchange Composite Closing Prices. Columns include 12 Month High/Low, Stock Name, Div. Yld., P/E, and Price. Rows are organized by stock name starting with A (Able, Adams, etc.) and continuing through Z (Zion, Zions). Includes a 'Continued from Page 21' label at the top left.

Sales figures are unofficial. Yearly highs and lows reflect the previous 52 weeks plus the current week, but not the latest trading day. Where a split or stock dividend amounting to 25 per cent or more has been paid, the year's high-low range and dividend are shown for the new stock only. Unless otherwise noted, rates of dividends are annual declarations based on the latest declaration.

a-children and/or adults; b-annual rate of dividend plus stock dividend; c-liquidating dividend; d-new yearly low; e-dividend declared or paid in preceding 12 months; f-dividend declared after split or stock dividend; g-dividend paid this year, omitted, deferred, or no action taken at least a dividend missing; h-dividend declared or paid this year, an accumulative issue with dividends in arrears; i-new issue in the past 52 weeks; j-high-low range begins with the start of trading; k-100-day moving average; l-100-day moving average; m-dividend paid in preceding 12 months; n-stock dividend; o-stock split; Dividends begin with date of split; p-100-day moving average; q-100-day moving average; r-100-day moving average; s-100-day moving average; t-100-day moving average; u-100-day moving average; v-100-day moving average; w-100-day moving average; x-100-day moving average; y-100-day moving average; z-100-day moving average.

WORLD VALUE OF THE POUND every Tuesday in the Financial Times

Handwritten signature or scribble at the bottom of the page.

WORLD STOCK MARKETS

OVER-THE-COUNTER

Nasdaq national market, closing prices, November 30

Table of Nasdaq national market closing prices for November 30, 1984. Columns include Stock, Sales, High, Low, Last, and Change. Lists various companies like AIG, ALC, AMT, etc.

CANADA

TORONTO

Closing prices November 30

Table of Toronto stock market closing prices for November 30, 1984. Columns include Sales, Stock, High, Low, Last, and Change. Lists companies like 1133, 1134, 1135, etc.

AUSTRIA

Table of Austria stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

BELGIUM/LUXEMBOURG

Table of Belgium/Luxembourg stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

DENMARK

Table of Denmark stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

FRANCE

Table of France stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

GERMANY

Table of Germany stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

NETHERLANDS

Table of Netherlands stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

GERMANY

Table of Germany stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

NETHERLANDS

Table of Netherlands stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

NETHERLANDS

Table of Netherlands stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

NORWAY

Table of Norway stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

AUSTRALIA

Table of Australia stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

DENMARK

Table of Denmark stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

FRANCE

Table of France stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

GERMANY

Table of Germany stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

NETHERLANDS

Table of Netherlands stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

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Table of Germany stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

NETHERLANDS

Table of Netherlands stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

NETHERLANDS

Table of Netherlands stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

HONG KONG

Table of Hong Kong stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

JAPAN

Table of Japan stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

JAPAN

Table of Japan stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

JAPAN

Table of Japan stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

JAPAN

Table of Japan stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

NOTES: Prices on this page are as quoted on the individual exchanges...

AMERICAN STOCK EXCHANGE CLOSING PRICES

Table of American Stock Exchange closing prices for November 30, 1984. Columns include 12 Month, Stock, Dr. Yld., P/E, High, Low, Last, and Change.

MONTREAL

Table of Montreal stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

SPAIN

Table of Spain stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

SPAIN

Table of Spain stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

SWEDEN

Table of Sweden stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

SWEDEN

Table of Sweden stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

SWEDEN

Table of Sweden stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

SINGAPORE

Table of Singapore stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

SINGAPORE

Table of Singapore stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.

SINGAPORE

Table of Singapore stock market closing prices for November 30, 1984. Columns include 1984, Nov. 30, Price, and Change.



Fuji unlocks new opportunities.

From today Fuji provides you with yet another instrument to invest in the Euro-Yen market. Our London office can now issue short term Euro-Yen Certificates of Deposit due to new liberalization measures. Take advantage of this significant development in the international money market.



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Mexico·Sao Paulo·Hong Kong·Singapore·Seoul·Manila·Jakarta·Bangkok
Kuala Lumpur·Beijing·Sydney

OVER-THE-COUNTER

Stock	Sales (Mtd)	High	Low	Last	Chng	Stock	Sales (Mtd)	High	Low	Last	Chng
Continued from Page 23											
Acad 4	14	64	62	64	+	Acad 4	14	64	62	64	+
Acad 8	14	64	62	64	+	Acad 8	14	64	62	64	+
Acad 14	14	64	62	64	+	Acad 14	14	64	62	64	+
Acad 21	14	64	62	64	+	Acad 21	14	64	62	64	+
Acad 28	14	64	62	64	+	Acad 28	14	64	62	64	+
Acad 35	14	64	62	64	+	Acad 35	14	64	62	64	+
Acad 42	14	64	62	64	+	Acad 42	14	64	62	64	+
Acad 49	14	64	62	64	+	Acad 49	14	64	62	64	+
Acad 56	14	64	62	64	+	Acad 56	14	64	62	64	+
Acad 63	14	64	62	64	+	Acad 63	14	64	62	64	+
Acad 70	14	64	62	64	+	Acad 70	14	64	62	64	+
Acad 77	14	64	62	64	+	Acad 77	14	64	62	64	+
Acad 84	14	64	62	64	+	Acad 84	14	64	62	64	+
Acad 91	14	64	62	64	+	Acad 91	14	64	62	64	+
Acad 98	14	64	62	64	+	Acad 98	14	64	62	64	+
Acad 105	14	64	62	64	+	Acad 105	14	64	62	64	+
Acad 112	14	64	62	64	+	Acad 112	14	64	62	64	+
Acad 119	14	64	62	64	+	Acad 119	14	64	62	64	+
Acad 126	14	64	62	64	+	Acad 126	14	64	62	64	+
Acad 133	14	64	62	64	+	Acad 133	14	64	62	64	+
Acad 140	14	64	62	64	+	Acad 140	14	64	62	64	+
Acad 147	14	64	62	64	+	Acad 147	14	64	62	64	+
Acad 154	14	64	62	64	+	Acad 154	14	64	62	64	+
Acad 161	14	64	62	64	+	Acad 161	14	64	62	64	+
Acad 168	14	64	62	64	+	Acad 168	14	64	62	64	+
Acad 175	14	64	62	64	+	Acad 175	14	64	62	64	+
Acad 182	14	64	62	64	+	Acad 182	14	64	62	64	+
Acad 189	14	64	62	64	+	Acad 189	14	64	62	64	+
Acad 196	14	64	62	64	+	Acad 196	14	64	62	64	+
Acad 203	14	64	62	64	+	Acad 203	14	64	62	64	+
Acad 210	14	64	62	64	+	Acad 210	14	64	62	64	+
Acad 217	14	64	62	64	+	Acad 217	14	64	62	64	+
Acad 224	14	64	62	64	+	Acad 224	14	64	62	64	+
Acad 231	14	64	62	64	+	Acad 231	14	64	62	64	+
Acad 238	14	64	62	64	+	Acad 238	14	64	62	64	+
Acad 245	14	64	62	64	+	Acad 245	14	64	62	64	+
Acad 252	14	64	62	64	+	Acad 252	14	64	62	64	+
Acad 259	14	64	62	64	+	Acad 259	14	64	62	64	+
Acad 266	14	64	62	64	+	Acad 266	14	64	62	64	+
Acad 273	14	64	62	64	+	Acad 273	14	64	62	64	+
Acad 280	14	64	62	64	+	Acad 280	14	64	62	64	+
Acad 287	14	64	62	64	+	Acad 287	14	64	62	64	+
Acad 294	14	64	62	64	+	Acad 294	14	64	62	64	+
Acad 301	14	64	62	64	+	Acad 301	14	64	62	64	+
Acad 308	14	64	62	64	+	Acad 308	14	64	62	64	+
Acad 315	14	64	62	64	+	Acad 315	14	64	62	64	+
Acad 322	14	64	62	64	+	Acad 322	14	64	62	64	+
Acad 329	14	64	62	64	+	Acad 329	14	64	62	64	+
Acad 336	14	64	62	64	+	Acad 336	14	64	62	64	+
Acad 343	14	64	62	64	+	Acad 343	14	64	62	64	+
Acad 350	14	64	62	64	+	Acad 350	14	64	62	64	+
Acad 357	14	64	62	64	+	Acad 357	14	64	62	64	+
Acad 364	14	64	62	64	+	Acad 364	14	64	62	64	+
Acad 371	14	64	62	64	+	Acad 371	14	64	62	64	+
Acad 378	14	64	62	64	+	Acad 378	14	64	62	64	+
Acad 385	14	64	62	64	+	Acad 385	14	64	62	64	+
Acad 392	14	64	62	64	+	Acad 392	14	64	62	64	+
Acad 399	14	64	62	64	+	Acad 399	14	64	62	64	+
Acad 406	14	64	62	64	+	Acad 406	14	64	62	64	+
Acad 413	14	64	62	64	+	Acad 413	14	64	62	64	+
Acad 420	14	64	62	64	+	Acad 420	14	64	62	64	+
Acad 427	14	64	62	64	+	Acad 427	14	64	62	64	+
Acad 434	14	64	62	64	+	Acad 434	14	64	62	64	+
Acad 441	14	64	62	64	+	Acad 441	14	64	62	64	+
Acad 448	14	64	62	64	+	Acad 448	14	64	62	64	+
Acad 455	14	64	62	64	+	Acad 455	14	64	62	64	+
Acad 462	14	64	62	64	+	Acad 462	14	64	62	64	+
Acad 469	14	64	62	64	+	Acad 469	14	64	62	64	+
Acad 476	14	64	62	64	+	Acad 476	14	64	62	64	+
Acad 483	14	64	62	64	+	Acad 483	14	64	62	64	+
Acad 490	14	64	62	64	+	Acad 490	14	64	62	64	+
Acad 497	14	64	62	64	+	Acad 497	14	64	62	64	+
Acad 504	14	64	62	64	+	Acad 504	14	64	62	64	+
Acad 511	14	64	62	64	+	Acad 511	14	64	62	64	+
Acad 518	14	64	62	64	+	Acad 518	14	64	62	64	+
Acad 525	14	64	62	64	+	Acad 525	14	64	62	64	+
Acad 532	14	64	62	64	+	Acad 532	14	64	62	64	+
Acad 539	14	64	62	64	+	Acad 539	14	64	62	64	+
Acad 546	14	64	62	64	+	Acad 546	14	64	62	64	+
Acad 553	14	64	62	64	+	Acad 553	14	64	62	64	+
Acad 560	14	64	62	64	+	Acad 560	14	64	62	64	+
Acad 567	14	64	62	64	+	Acad 567	14	64	62	64	+
Acad 574	14	64	62	64	+	Acad 574	14	64	62	64	+
Acad 581	14	64	62	64	+	Acad 581	14	64	62	64	+
Acad 588	14	64	62	64	+	Acad 588	14	64	62	64	+
Acad 595	14	64	62	64	+	Acad 595	14	64	62	64	+
Acad 602	14	64	62	64	+	Acad 602	14	64	62	64	+
Acad 609	14	64	62	64	+	Acad 609	14	64	62	64	+
Acad 616	14	64	62	64	+	Acad 616	14	64	62	64	+
Acad 623	14	64	62	64	+	Acad 623	14	64	62	64	+
Acad 630	14	64	62	64	+	Acad 630	14	64	62	64	+
Acad 637	14	64	62	64	+	Acad 637	14	64	62	64	+
Acad 644	14	64	62	64	+	Acad 644	14	64	62	64	+
Acad 651	14	64	62	64	+	Acad 651	14	64	62	64	+
Acad 658	14	64	62	64	+	Acad 658	14	64	62	64	+
Acad 665	14	64	62	64	+	Acad 665	14	64	62	64	+
Acad 672	14	64	62	64	+	Acad 672	14	64	62	64	+
Acad 679	14	64	62	64	+	Acad 679	14	64	62	64	+
Acad 686	14	64	62	64	+	Acad 686	14	64	62	64	+
Acad 693	14	64	62	64	+	Acad 693	14	64	62	64	+
Acad 700	14	64	62	64	+	Acad 700	14	64	62	64	+
Acad 707	14	64	62	64	+	Acad 707	14	64	62	64	+
Acad 714	14	64	62	64	+	Acad 714	14	64	62	64	+
Acad 721	14	64	62	64	+	Acad 721	14	64	62	64	+
Acad 728	14	64	62	64	+	Acad 728	14	64	62	64	+
Acad 735	14	64	62	64	+	Acad 735	14	64	62	64	+
Acad 742	14	64	62	64	+	Acad 742	14	64	62	64	+
Acad 749	14	64	62	64	+	Acad 749	14	64	62	64	+
Acad 756	14	64	62	64	+	Acad 756	14	64	62</		

CONSTRUCTION CONTRACTS

Lelliott wins £11m in London

THE JOHN LELLIOTT GROUP has been awarded contracts totalling £11.5m for various projects including Universal House, Harvey Nicholls, Gloucester Hotel, Barracuda Club and Sadlers Wells.

MYTON has been awarded a £2m contract by Wesley Estates (part of M.E.P.C.) for the construction of about 80,000 sq ft of warehouse and industrial accommodation in Greenford, Middlesex. The nine speculative units will be constructed in two blocks, the first consisting of five warehouses with a total floor area of about 40,000 sq ft. The second block has four units with a total floor area of 15,000 sq ft. A further 25,000 sq ft is to be constructed in one unit as a distribution warehouse. The structures, comprising precast concrete and steel frames with power floated floors, will include profiled external cladding and metal roof sheeting. Completion is scheduled for early September 1985.

CRITALL CONSTRUCTION, a member of the Norcross Group, has won a £2m contract for curtain walling for an office building in Reading—the Abbey Gardens scheme being undertaken by MEPC and Legal and General.

£6m City office block

BY JOAN GRAY, CONSTRUCTION CORRESPONDENT

MOWLEM has won a £6m contract to build a seven-storey 68,000 sq ft office block at 77-80 Gracechurch Street—in the heart of the City of London—for Land Securities, subsidiary of The City of London Real Property Company.

The contract—which Mowlem won in competitive tender—involves excavating the

site to construct two levels of basement and then building the seven storeys of offices and two shops above. The building will have a reinforced concrete frame and will be clad with Portland stone and brick. Work starts this month for completion in August 1986, and Land Securities hopes to let the building to a bank or insurance company.

Tarmac

Contracts worth over £7m have been awarded to TARMAC CONSTRUCTION. The largest, at nearly £2m, is for a warehouse at Worcester for Kay and Company. It is scheduled for completion next summer. Other projects include refurbishing a building at Petercourt, Peterborough, for Peterborough Development Corporation (£854,000); modernising 61 homes at Castle Donnington, North-West Leicestershire District Council (£858,000); modernising and repairing homes at Grimley, Worcestershire, for Malvern Hills District Council (£292,000); and alterations to a workshop and the formation of a service lane at North Shields, for Northern General Transport (£278,000). In Scotland, Tarmac Cubitts—part of Tarmac Construction—has a contract, worth about £1.3m, for alterations to an existing building in North Bridge, Edinburgh, for D.C.I. (Scotland); and a £504,000 contract for a petroleum engineering building at Heriot Watt University, Edinburgh. Tarmac Cubitts also has a £338,000 project for a garage workshop and offices at Avonmouth, near Bristol, for Fordon Commercial. Two other Tarmac Construction companies, Neslo Partitioning and Tarmac Refurb, also have orders. Neslo is fitting partitions at Southport Hospital (£378,000); and Tarmac Refurb has work at Park Court, Warwick Road, Coventry, for the Property Services Agency (£577,000).

Brignell builds in Cambridge

A £1.2m private housing scheme for the retired at Arbury Road, Cambridge, is part of new work worth over £2m awarded to JOHN BRIGNELL. The contract, for 67 flats, has been placed by Anglia Secure Homes. Work on the site is due to commence this month for completion in February, 1986.

A second contract is for a £80,000 development of shops and offices at 184 to 187, East Road, Cambridge, the site of the former Marcade, for Abbeygate Properties. The development will include a 3,000 sq ft ground floor for the House of Holland.

John Brignell is also involved in the fourth phase of the comprehensive house improvements

scheme which Cambridge City Council is undertaking at Ditton Fields. Work covers modernisation and refurbishment of a further 32 homes.

BOWEY CONSTRUCTION has added £2m to its order book. In Gosforth, work has started on refurbishment of Ashleigh House for the City of Newcastle. The scheme, worth £382,000, is for a home for aged persons. At a scheme in Berwick, Bowey is building a 23,500 sq ft extension to the polychrome factory. Modernising 64 houses at Lynemouth and 17 in various villages to start for Castle Morpeth Borough Council. In Amble, Bowey is repairing Airey system-built houses on a project involving 85 homes.

CHIVERS Our business has been building since 1884

21 Esquire Street, Devizes, Wiltshire SN10 1LL
Tel: 0380 7121. Telex: 449350
CHIVERS
WE CHIVERS & SONS LTD

£7m for Conder

IEI SOUTHERN AND NORTHERN, mechanical and electrical building services companies of the Conder Group have secured order worth over £7.5m. The contracts are for a variety of clients ranging from the PSA, for the Navy in Rosyth, to a new head office for Townsend Thoresen Car Ferries in Portsmouth. They include a £1.6m leisure centre in Bolepool, two hotels for Hotels International Group at Basingstoke and Swansea, £1m factory for Brinton Carpets, Telford, and offices for Marconi Space and Defence Systems at Portsmouth.

TURBIEFF CONSTRUCTION has been awarded a contract by Milton Keynes Development Corporation for the construction of a three-storey office block at Midsummer Boulevard, Milton Keynes. The contract is worth about £2.1m and work starts in January for completion by October.

This advertisement is issued in compliance with the requirements of the Council of The Stock Exchange. It does not constitute an invitation to any person to subscribe for or purchase any Convertible Cumulative Preference Shares.

Johnson Matthey Public Limited Company

(Registered in England No. 33774)

Proposed to be authorised	Share Capital	Issued and to be issued fully paid
£194,702,426	Ordinary Shares of £1 each	133,215,753
450,000	5% Cumulative Preference Shares of £1 each	300,000
25,259,521	8% Convertible Cumulative Preference Shares of £1 each	25,259,521
220,411,947		158,775,274

Application has been made to the Council of The Stock Exchange for the 25,259,521 8 per cent. Convertible Cumulative Preference Shares of £1 each of Johnson Matthey Public Limited Company to be admitted to the Official List subject to the passing of resolutions at an Extraordinary General Meeting of Johnson Matthey Public Limited Company to be held on 6th December, 1984 and to allotment.

Particulars relating to the Convertible Cumulative Preference Shares are available in the statistical services of Extel Statistical Services Limited and copies of such particulars may be obtained during normal business hours on any weekday (Saturdays and public holidays excepted) up to and including 27th December, 1984 from:

S. G. Warburg & Co. Ltd., or from Phillips & Drew,
33 King William Street, 120 Moorgate,
London, EC4R 9AS London, EC2M 6XP

APPOINTMENTS

Royal Trust of Canada appoints new chairman

THE ROYAL TRUST COMPANY OF CANADA has appointed Mr Nigel Robson as chairman. His appointment follows the retirement of Sir Francis Sandilands who has been chairman of Royal Trust for almost 10 years. Mr Robson is currently deputy chairman of the Ottoman Bank and a director of the Central Trustee Savings Bank. His other banking appointment is London adviser to the Bank of Tokyo Group. Mr Robson is also chairman of Alexander Howden Underwriting and a director of British Sugar.

At I. J. DEWHIRST HOLDINGS the vice chairman, Mr Michael S. Dewhurst has retired and Mr James A. R. Dewhurst becomes vice chairman. Mr Anthony Vee, N. M. Rothschild and Sons, is appointed a non-executive director. Mr Scott S. Beattie becomes financial director

for succeeding Mr Douglas C. McQueen who is leaving to become a financial consultant. Mr George E. Vire is retiring. Mr Tom Edges, Mr Ian R. Dewhurst and Mr Tim C. Dewhurst become joint managing directors as part of a reorganisation of the company's executive structure.

TERRAPIN has appointed Mr Peter Cheshire as managing director. He takes over from Mr Jack Johnson who has resigned with a view to early retirement in 1985. Mr Cheshire was deputy managing director.

Mr U. Magnusson has been appointed a special director of CREDIT AND GUARANTEE INSURANCE. This appointment arises as a result of his company, Svenska-Kredit, a Swedish credit insurance and guarantee

company, having acquired a 25 per cent shareholding in Credit and Guarantee.

BARCLAYS INSURANCE SERVICES COMPANY, wholly-owned insurance broking subsidiary of Barclays Bank, has appointed Mr Peter Harwood, formerly head of accounts and automation, as head of management services. Mr Paul Wheeler has become head of education and training. He was previously district life and pensions broker for the bank's London eastern district. Mr Allan Colthe, previously responsible for training, has been appointed head of staff and administration.

Mr Alan M. Dean, currently a main board director of N. M. Rothschild and Sons and chief executive of its Manchester office, is to join N. BROWN

INVESTMENTS from January 14 as chief executive. This is a new post and carries with it the prime responsibility for the expansion of the group by acquisition. Mr Dean is resigning from the board of N. M. Rothschild on December 31.

At CHEMIRING, Portsmouth-based manufacturer of passive anti-radar material (cbaff), Mr Ian Fairfield relinquishes the post of chief executive but remains chairman. Dr David Kieley takes over as chief executive on his resignation as chief naval weapons systems engineer, a new post created in 1983 as part of the recent reorganisation of the controllerate of the navy.

Mr Ian Wilson has been appointed director and general manager of VREDESTEN (UK), a subsidiary of the Dutch Vredestein Group.

PATERSON ZOCHONIS

Highest ever profits in Centenary Year

Highlights of the year ended 31st May 1984		
	1984	1983
Turnover:	£262 million	£276 million
Profit before tax:	£30.9 million	£26.9 million
Total dividend per share:	5.15p	4.75p

"Despite a year of difficult and at times, uncertain trading conditions the group in 1984 produced its highest-ever profits."

Nigeria
In Nigeria three factors benefitted the group. Firstly, a four year £100 million capital expenditure programme to increase local manufacturing capacity had reached completion; secondly, the Nigerian Government, having classified soaps and detergents as essential commodities, provided the requisite import licenses for raw materials and spare parts; thirdly, the group continued its policy of financing adequate levels of its raw material and other import requirements. Operations in Nigeria thus made a significant contribution to the Government's efforts to alleviate shortages and also produced higher profits.

Cussons
The contribution of the Cussons group showed an improvement over the previous year with Australia and Kenya reporting their highest profits to date. In the United Kingdom Cussons' results continued to be depressed by the slow recovery of manufacturing performance and by higher raw material prices.

Other operations
The performance of other group operations overseas was generally satisfactory apart from Greece, where results have been adversely affected by increasingly harsh price controls.

PATERSON ZOCHONIS PLC, BRIDGEWATER HOUSE,
60 WHITWORTH STREET, MANCHESTER M1 6LU.

Africa - United Kingdom & Europe - Australia & Far East



This advertisement complies with the requirements of the Council of The Stock Exchange in London.

3rd December, 1984



THE ROYAL BANK OF CANADA

(a Canadian chartered bank)

£40,000,000

10% Deposit Notes due 15th December, 1991

Issue Price 100%

The following have agreed to subscribe or procure subscribers for the Notes:

- | | |
|------------------------------------------------|----------------------------------------------|
| Orion Royal Bank Limited | S.G. Warburg & Co. Ltd. |
| County Bank Limited | |
| Barclays Bank Group | Baring Brothers & Co., Limited |
| Credit Suisse First Boston Limited | Deutsche Bank Aktiengesellschaft |
| Hambros Bank Limited | Kleinwort, Benson Limited |
| Lloyds Bank International Limited | Samuel Montagu & Co. Limited |
| Morgan Grenfell & Co. Limited | Swiss Bank Corporation International Limited |
| Union Bank of Switzerland (Securities) Limited | Wood Gundy Inc. |

The Council of The Stock Exchange in London has granted permission for the Notes in the denomination of £5,000 constituting the above issue to be admitted to the Official List, subject to the issue of the temporary Global Note. Interest is payable annually in arrears on 15th December in each year, beginning on 15th December, 1985.

Particulars of the Notes are available in the Extel Statistical Service and may be obtained during normal business hours on any weekday (Saturdays and public holidays excepted) up to and including 14th December, 1984 from:-

- | | | |
|----------------------------------------------------------------|------------------------------------------------------------|--------------------------------------------------------------------------|
| Orion Royal Bank Limited,
1 London Wall,
London EC2Y 5JX | Kitcat & Aitken,
The Stock Exchange,
London EC2N 1HB | W. Greenwell & Co.,
Bow Bells House, Broad Street,
London EC4M 9EL |
|----------------------------------------------------------------|------------------------------------------------------------|--------------------------------------------------------------------------|

This advertisement complies with the requirements of the Council of The Stock Exchange.



Banque Nationale de Paris p.l.c.

(Incorporated in England with limited liability under the Companies Act 1929)

£25,000,000

Subordinated Floating Rate Serial Notes 1994

The issue price of the Notes will be 100 per cent. of their principal amount.

The following have agreed to subscribe or procure subscribers for the Notes:

- | | |
|-----------------------------------|------------------------------------------|
| Morgan Grenfell & Co. Limited | S. G. Warburg & Co. Ltd. |
| Kleinwort, Benson Limited | Baring Brothers & Co., Limited |
| Barclays Merchant Bank Limited | Hill Samuel & Co. Limited |
| County Bank Limited | J. Henry Schroder Wagg & Co. Limited |
| Lloyds Bank International Limited | Standard Chartered Merchant Bank Limited |

The Notes constituting the above issue have been admitted to the Official List by the Council of The Stock Exchange, subject only to the issue of the Notes.

Interest on the Notes will be payable semi-annually in arrears in each June and December commencing in June 1985.

Particulars of the Notes and of the issuer are available in the statistical services of Extel Statistical Services Limited and may be obtained during usual business hours up to and including 17 December, 1984 from the Brokers to the issue.

Hoare Govett Ltd.
Heron House
319-325 High Holborn
London WC1V 7PB

3 December, 1984

AUTHORISED UNIT TRUSTS

Table of authorised unit trusts including categories like British Equities, International, and Bond Funds, with columns for fund names and values.

FT UNIT TRUST INFORMATION SERVICE

Main table of FT Unit Trust Information Service listing various unit trusts, their managers, and performance metrics.

City of Westminster Assurance

Table listing City of Westminster Assurance products and details.

General Portfolio Ltd. P.L.C.

Table listing General Portfolio Ltd. P.L.C. products and details.

General Portfolio Ltd. P.L.C. (continued)

Table listing General Portfolio Ltd. P.L.C. products and details (continued).

General Portfolio Ltd. P.L.C. (continued)

Table listing General Portfolio Ltd. P.L.C. products and details (continued).

General Portfolio Ltd. P.L.C. (continued)

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General Portfolio Ltd. P.L.C. (continued)

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General Portfolio Ltd. P.L.C. (continued)

Table listing General Portfolio Ltd. P.L.C. products and details (continued).

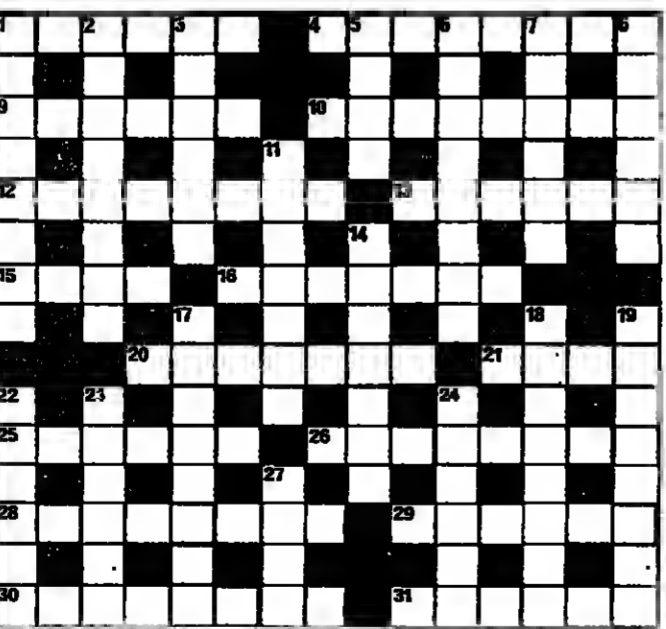
General Portfolio Ltd. P.L.C. (continued)

Table listing General Portfolio Ltd. P.L.C. products and details (continued).

F.T. CROSSWORD

PUZZLE No. 5,585

- ACROSS
1 Signal to someone left behind (6)
4 The deficit on business with the States is mammoth (8)
9 Witness noticed something moving in the park (3-3)
12 Break shower control (8)
13 This mechanic appears to be better (6)
15 Dines in style at several restaurants (4)
16 A memorial to waste (7)
20 Handle foreign currency reserve (7)
21 Barrel and stock of gun (4)
25 Disagree with work to be affected (6)
26 Commentator is beginning to get too old for reporting (8)
28 Cold chisel can be supplied ex stock (4, 4)
29 Deliberately loses most of the fights (6)
30 Congress make reference to turnover of food (6)
DOWN
1 Director of Intelligence makes trouble (6)
2 Plays back centre in new formation (2-6)
3 Horace cooked this plant instead of spinach (6)
5 In Rome no one put up writing on the wall (4)
6 Completely unconscious? Correct (8)



- 7 This part at the end includes the old city (6)
8 Divers need something warm and watertight (6)
11 A very small part in any scientific study (7)
14 Fight over space available for storage (3-4)
17 It's murder in the service (6)
18 Organise a contest for a car (8)
19 Returned desserts: put Weight on (8)
22 Prohibited from supporting with (6)
23 Well turned out in the wood (6)
24 We end up with the right animal (6)
27 In France, a measurement of dress length (4)
The solution to last Saturday's prize puzzle will be published with names of winners next Saturday.

Handwritten signature or mark at the bottom of the page.

Handwritten Arabic text at the top center of the page.

INSURANCE, OVERSEAS & MONEY FUNDS

Table of insurance and overseas funds, including Liberty Life Insurance Co Ltd, National Provident Institution, and various international investment funds.

Main table of insurance, overseas, and money funds, listing various fund names, their managers, and performance metrics.

Table of money funds, including Midland Bank Top Corp (Jersey) Ltd, Guinness (Jersey) Ltd, and various other investment funds.

OFFSHORE AND OVERSEAS

Table of offshore and overseas funds, including S.E. Europe Obligations S.A., Agri Investments, and various international investment funds.

Money Market

Table of money market rates and prices, including various bank deposits and short-term instruments.

Trust Funds

Table of trust funds, including various investment trusts and their performance data.

Money Market

Table of money market rates and prices, including various bank deposits and short-term instruments.

Bank Accounts

Table of bank accounts, including various international and domestic banking services and their terms.

HOTELS—Continued

Table with columns: Company, Stock, Price, Last, Bid, Offer, % Chg.

FT LONDON SHARE INFORMATION SERVICE

DAI-CHI EUROPE LIMITED For EQUITIES & BONDS

Durant House, 8-13, Chiswell Street, London EC1Y 4TD. Telephone: 01 588 4272. Telex: 853335 ICHLD.

BRITISH FUNDS

Table with columns: Fund Name, Stock, Price, Last, Bid, Offer, % Chg.

Five to Fifteen Years

Table with columns: Fund Name, Stock, Price, Last, Bid, Offer, % Chg.

Over Fifteen Years

Table with columns: Fund Name, Stock, Price, Last, Bid, Offer, % Chg.

Undated

Table with columns: Fund Name, Stock, Price, Last, Bid, Offer, % Chg.

Index-Linked

Table with columns: Fund Name, Stock, Price, Last, Bid, Offer, % Chg.

CORPORATION LOANS

Table with columns: Company, Stock, Price, Last, Bid, Offer, % Chg.

COMMONWEALTH AND AFRICAN LOANS

Table with columns: Company, Stock, Price, Last, Bid, Offer, % Chg.

LOANS

Table with columns: Company, Stock, Price, Last, Bid, Offer, % Chg.

Public Board and Ind.

Table with columns: Company, Stock, Price, Last, Bid, Offer, % Chg.

Financial

Table with columns: Company, Stock, Price, Last, Bid, Offer, % Chg.

FOREIGN BONDS & RAILS

Table with columns: Company, Stock, Price, Last, Bid, Offer, % Chg.

AMERICANS

Table with columns: Company, Stock, Price, Last, Bid, Offer, % Chg.

BEERS, WINES—Cont.

Table with columns: Company, Stock, Price, Last, Bid, Offer, % Chg.

BUILDING INDUSTRY, TIMBER AND ROADS

Table with columns: Company, Stock, Price, Last, Bid, Offer, % Chg.

CANADIANS

Table with columns: Company, Stock, Price, Last, Bid, Offer, % Chg.

BANKS, HP AND LEASING

Table with columns: Company, Stock, Price, Last, Bid, Offer, % Chg.

CHEMICALS, PLASTICS

Table with columns: Company, Stock, Price, Last, Bid, Offer, % Chg.

DRAPERY AND STORES

Table with columns: Company, Stock, Price, Last, Bid, Offer, % Chg.

BEERS, WINES AND SPIRITS

Table with columns: Company, Stock, Price, Last, Bid, Offer, % Chg.

DRAPERY & STORES—Cont.

Table with columns: Company, Stock, Price, Last, Bid, Offer, % Chg.

ENGINEERING—Continued

Table with columns: Company, Stock, Price, Last, Bid, Offer, % Chg.

ELECTRICALS

Table with columns: Company, Stock, Price, Last, Bid, Offer, % Chg.

FOOD, GROCERIES, ETC

Table with columns: Company, Stock, Price, Last, Bid, Offer, % Chg.

HOTELS AND CATERERS

Table with columns: Company, Stock, Price, Last, Bid, Offer, % Chg.

ENGINEERING

Table with columns: Company, Stock, Price, Last, Bid, Offer, % Chg.

HOTELS AND CATERERS

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INDUSTRIALS (Misc.)

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INDUSTRIALS (Misc.)

Table with columns: Company, Stock, Price, Last, Bid, Offer, % Chg.

Handwritten signature: J. J. J.

INDUSTRIALS - Continued

Table of industrial stocks including companies like British Petroleum, Shell, and ICI, with columns for stock price, last price, and volume.

LEISURE - Continued

Table of leisure stocks including companies like British Skyways, British Telecom, and British Airways.

PROPERTY - Continued

Table of property stocks including companies like British Land, Granada, and British Telecommunications.

INVESTMENT TRUSTS - Cont.

Table of investment trusts including companies like British Venture, British Venture, and British Venture.

OIL AND GAS - Continued

Table of oil and gas stocks including companies like British Petroleum, Shell, and ICI.

Whittingham Property BIRMINGHAM 021-501 3993 LONDON 01-491 1438

MINES - Continued

Table of mining stocks including companies like Anglo American, De Beers, and Anglo Coal.

MOTORS, AIRCRAFT TRADES

Table of motor and aircraft trade stocks including companies like British Aerospace and British Leyland.

MOTORS AND CYCLES

Table of motor and cycle stocks including companies like British Leyland and British Motor.

COMMERCIAL VEHICLES

Table of commercial vehicle stocks including companies like British Leyland and British Motor.

COMPONENTS

Table of component stocks including companies like British Leyland and British Motor.

GARAGES AND DISTRIBUTORS

Table of garage and distributor stocks including companies like British Leyland and British Motor.

SHOES AND LEATHER

Table of shoe and leather stocks including companies like British Leather and British Shoes.

NEWSPAPERS, PUBLISHERS

Table of newspaper and publisher stocks including companies like British Newspapers and British Publishers.

PAPER, PRINTING ADVERTISING

Table of paper, printing, and advertising stocks including companies like British Paper and British Advertising.

TEXTILES

Table of textile stocks including companies like British Textiles and British Clothing.

SOUTH AFRICANS

Table of South African stocks including companies like Anglo American and De Beers.

OVERSEAS TRADERS

Table of overseas trader stocks including companies like British Overseas and British Traders.

MISCELLANEOUS

Table of miscellaneous stocks including companies like British Miscellaneous and British Various.

INSURANCES

Table of insurance stocks including companies like British Insurance and British Risk.

PROPERTY

Table of property stocks including companies like British Land and British Real Estate.

TRUSTS, FINANCE, LAND

Table of trusts, finance, and land stocks including companies like British Trusts and British Finance.

OIL AND GAS

Table of oil and gas stocks including companies like British Petroleum and Shell.

PLANTATIONS

Table of plantation stocks including companies like British Plantations and British Rubber.

MINES

Table of mining stocks including companies like Anglo American and De Beers.

REGINALD & IRISH STOCKS, OPTIONS 3-month call rates, Finance, Diamond and Platinum, and a note about the service.

CURRENCIES, MONEY and CAPITAL MARKETS

ZANDPAN GOLD MINING COMPANY LIMITED. Incorporated in the Republic of South Africa. Sub-Division of Shares. At the General Meeting of members of Zandpan held on 30 November 1984, a special resolution was passed...

Can You Remember The Details of Your Business Conversation? Do you have proof of Verbal Commitment? VANCERED can provide protection and proof of every business personal conversation with...

KANSALLIS-OSAKE-PANKKI U.S. \$25,000,000 Floating Rate Capital Notes 1989. In accordance with the terms and conditions of the above mentioned notes, notice is hereby given that the rate of interest for the six months from 23rd November 1984 to 23rd May 1985 has been fixed at 10 1/4% per annum...

FINANCIAL FUTURES

Table of financial futures including LONDON EURO DOLLAR, U.S. TREASURY BONDS, CHICAGO, U.S. TREASURY BILLS, and STERLING EXCHANGE RATE INDEX.

WEEKLY CHANGE IN WORLD INTEREST RATES

Table showing weekly change in world interest rates for various locations including LONDON, NEW YORK, PARIS, BRUSSELS, AMSTERDAM, TOKYO, and HONG KONG.

Dollar in sight of new ground

BY COLIN MILLHAM. Market perception of the dollar's future movements has changed quite dramatically during the last few weeks. About a month ago the U.S. currency was seen to be entering a period of weakness, as economic growth slowed and interest rates fell, but once again it seems to have proved a false dawn, and dealers are now talking about new records for the dollar.

FOREIGN EXCHANGES

Table of foreign exchange rates including Sterling Exchange Rate Index, Dollar Spot-Forward Against Dollar, and Bank of England Treasury Bill Tender.

POUND SPOT—FORWARD AGAINST POUND

Table showing pound spot and forward rates against the pound for various currencies.

OTHER CURRENCIES

Table of other currency rates including Argentina, Australia, Brazil, Canada, Denmark, France, Germany, Hong Kong, India, Italy, Japan, Korea, Luxembourg, Malaysia, New Zealand, Singapore, South Africa, and Switzerland.

BANK OF ENGLAND TREASURY BILL TENDER

Table of Bank of England Treasury Bill tender details including bill on offer, total applications, and accepted bids.

DOLLAR SPOT—FORWARD AGAINST DOLLAR

Table of dollar spot and forward rates against the dollar for various currencies.

CURRENCY MOVEMENTS

Table of currency movements showing changes in exchange rates for various currencies.

EMS EUROPEAN CURRENCY UNIT RATES

Table of EMS European Currency Unit rates for various European currencies.

EXCHANGE CROSS RATES

Table of exchange cross rates for various currencies.

CURRENCY RATES

Table of currency rates for various currencies.

EURO-CURRENCY INTEREST RATES (Market closing rates)

Table of Euro-currency interest rates for various currencies.

DISCOUNT HOUSES DEPOSIT AND BILL RATES

Table of discount houses deposit and bill rates.

MONEY MARKETS

A quiet week on the London money market drew to a close with interest rates virtually unchanged from the previous Friday. Hopes of another cut in clearing bank base rates remain alive, but at the moment the market is going through a period of consolidation and is keeping one eye on sterling.

MONEY RATES

Table of money rates for various currencies.

LONDON MONEY RATES

Table of London money rates for various currencies.

MONEY RATES

Table of money rates for various currencies.

FT LONDON INTERBANK FIXING

Table of FT London interbank fixing rates for various currencies.

MONEY RATES

Table of money rates for various currencies.

NEW YORK (4 pm)

Table of New York money rates for various currencies.

MONEY RATES

Table of money rates for various currencies.

MONEY RATES

Table of money rates for various currencies.



TRW is a widely diversified company on the leading edge of electronics and space technology. Our Pioneer 10 spacecraft (pictured) was the first man-made object to leave the solar system. And TRW electronic components have hundreds of down-to-earth applications — from computer tape drives to television sets.



TRW began as an automotive parts manufacturer over 80 years ago. Today, almost every car and truck on the road contains TRW parts. TRW factories around the globe produce a wide range of automotive parts — from bearings and valves to complete rack and pinion steering systems.



TRW industrial and energy products have earned a reputation for reliable performance. TRW equipment, backed up by an extensive field service and repair network, helps pump oil and gas around the world. TRW components keep the world's aircraft flying; and TRW bearings, tools, and fasteners help raise productivity levels worldwide.

TRW logo and text: TRW Inc. 1984. TRW is the name and mark of TRW Inc. TRW Inc., Cleveland, Ohio, USA. A Company Called TRW.

FINANCIAL TIMES SURVEY

The software industry is growing at an unprecedented rate, but fragmenting as it does so into distinct, sometimes opposing, camps. It means that difficult decisions are ahead for software manufacturers, suppliers and users.

Computer Software

Approaching the great divide

BY ALAN CANE

THE SOFTWARE business world-wide has been through one major revolution in the past five years; now it seems set for further upheavals as the full implications of personal computing sink in.

The first revolution created two software industries in the West: the traditional mainframe and minicomputer orientated business with its emphasis on established data processing departments in business, government or defence, and the new microcomputer orientated business centred around personal computing, whether for business or leisure.

The traditional software business, concentrating principally on the creation of software tailored to its customers' precise requirements and on the sale of "packages" of generalised

software, was a comfortable growth business in which the better companies prospered even if it failed to tempt the entrepreneurs and the City. Management Science America

(MSA), for example, became the largest independent computer software company in the world with more than 12,000 systems in use through its dedication to the sale of business packages for accounting, purchasing and so on.

The microcomputer software business was completely different. It was fast-moving, unpredictable, and it offered fast profits to investors. Only a year ago, it seemed that an investment in any software company was bound to succeed.

Companies such as Visicorp, Microsoft, Digital Research, and Lotus were topping the business software rankings and demonstrating dramatic growth. Software authors were making their fortunes overnight.

But now the pattern has changed dramatically. Most of the major stars of the microcomputer software business are still there but, like Visicorp, shining less brightly.

IBM to the microsoftware market, even if the redoubtable Ben Rosen dismisses its software as "lousy personal computer software that is not going to sell well" has yet to be seen.

A distinct dichotomy is emerging: consider, for example, the fates of Lotus and Digital Research.

Integrated systems

Lotus is still top of the software pops with its integrated software package "1-2-3". Its yet more integrated successor "Symphony" is number two in the Business Bestsellers' chart compiled by the authoritative U.S. newspaper Software News, but even Mitchell Kapor, Lotus chairman and inventor of the integrated microsoftware package, agrees that it will not have such wide appeal.

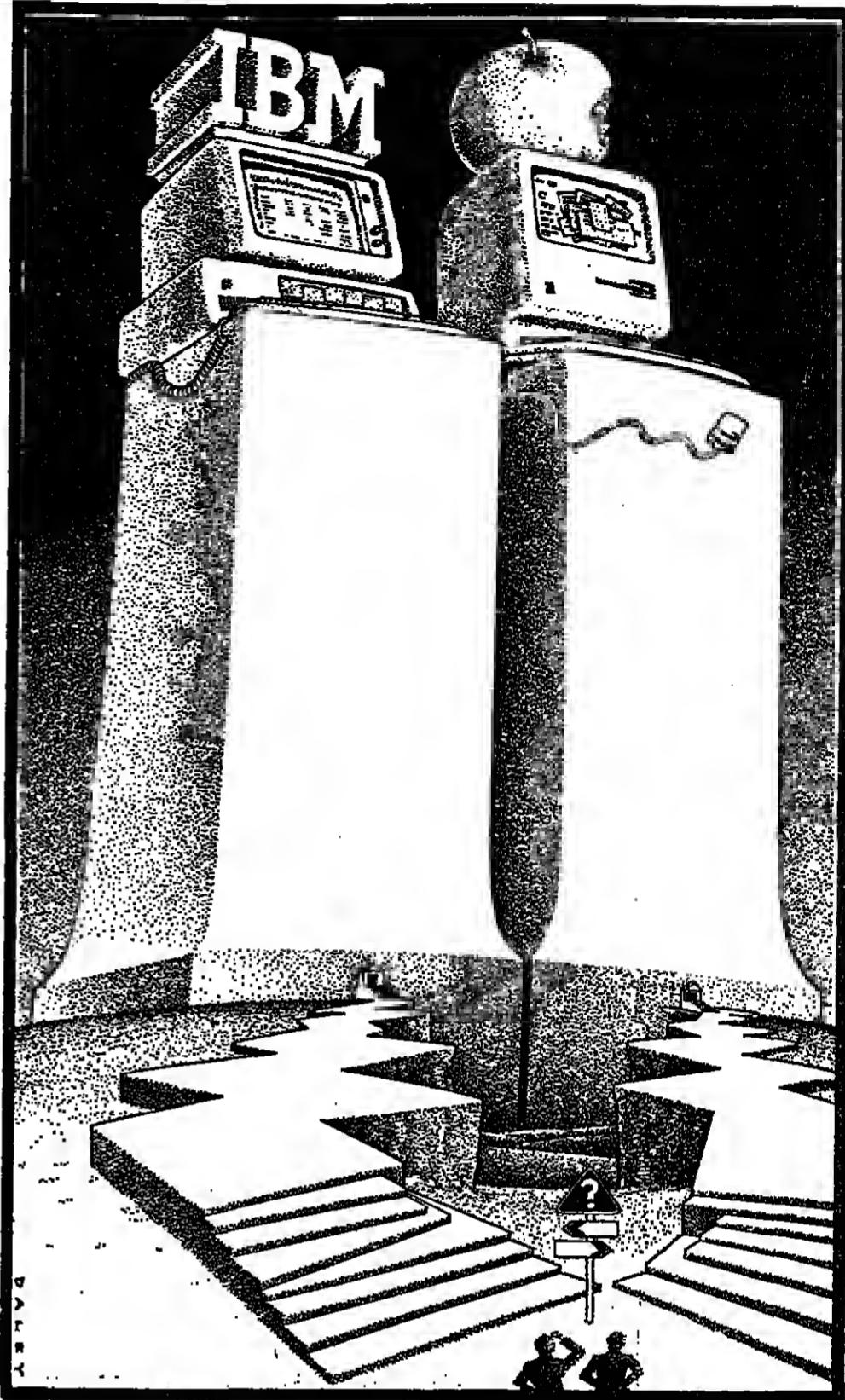
Integrated packages were one approach to making microcomputing easier for ordinary businessmen. It gave them the ability to use a spreadsheet, database and graphics without switching disks several times.

Symphony added word processing and communications, but in doing so made the whole package much harder for the non-computer specialist to handle.

Speaking at a Financial Times conference last month, Mr Kapor said: "The appeal of Symphony is centred among the more quantitatively oriented, the more sophisticated or power users; to the extent that we at Lotus encouraged the world at large to believe that Symphony integrated software would become a panacea or universal solution, I think that is not the case."

Lotus has, in fact, just announced a new integrated package, Jazz, that runs on Apple's Macintosh computer with its screen icons, windows and mouse. Mr Kapor argued: "For the first time, we are going to have a product for the less sophisticated user, as opposed to the power-user or spreadsheet number cruncher."

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12 Can you link my personal computer directly to our central computer - so I can get my own information? Does your micro/mainframe link provide user driven tools for decision support? And does it isolate the user from all technical considerations?
13 How long have you been in the application software business? And how important is packaged software business to your company? What are your revenues? What is your growth record? Where will your company be five years from now?
14 How many systems has your company installed? How many of these were installed in the past six months? How many of your earlier customers still use, and like, your systems?
15 How many of your staff specialise in software for my industry? How many Accountants work for you? Data Processing specialists? Experts from a Manufacturing environment? Are they willing to spend time working with us to understand our real problems and identify total solution?
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Computer Software 2

The survival of the fittest

"SURVIVE IN '85" is the latest slogan for U.S. personal computer software developers. In the midst of an industry shakeout that makes the cut-throat competition of the personal computer hardware business look like a good natured hunk fight, software companies are trying to figure out how to stay alive in an increasingly hostile environment.

Estimates put the number of U.S. personal computer software companies at the beginning of this year at around 6,000. By January 1985 less than half of these companies will remain in business, according to industry experts.

U.S. sales of personal computer software will continue to grow steadily, according to Future Computing, the Richardson, Texas market research firm. The analysts expect world sales this year to total \$3.7bn, rising to over \$11bn by 1987. In the meantime, however, the software industry is expected to go through a major transformation.

The restructuring of the personal computer software industry is well underway, but it could

duplication systems and services. The industry is moving from being "scattered and disorganized" into a structured business hierarchy, he believes.

"The software industry is basically still quite new and thus, is made up mainly of small entrepreneurial firms and individuals who are either writing software programs for computer manufacturers or are developing, marketing and distributing programs themselves," says Mr Kadison.

The transition from cottage industry to a major international business is inevitable and may indeed benefit the consumer, Kadison suggests. Smaller software firms are having significant financial problems, while multinational companies, such as IBM and AT&T have made major commitments to personal computer software publishing.

"The days of the rags-to-riches stories in the software industry are quickly fading," warns Mr Kadison. It is becoming increasingly difficult for small companies to compete and market their own software because of the huge financial and manpower resources needed, he explains.

The opposite was true just 12 months ago. Then, anybody with programming talent and a personal computer could bring a software product to market. Marketing costs were minimal. Today the picture is very different. Just packaging a computer program profitably can cost upward of \$20,000. Advertising budgets totalling over \$1m are not unusual. For a new software company, the biggest problem is, however, reaching the customer. Without the assistance of a large software publisher,

Developments in the U.S.

LOUISE KEHOE in California

last another year suggests Mr Eric Kadison, vice president of product planning and development for Media Systems Technology, an Irvine, California-based supplier of software.

U.S. software and services industry

Type of company	Number of companies	Noncompetitive U.S. revenue 1983 (\$bn)	Employees ('000)	Public companies after tax profit margin (%)
Processing services	2,150	14.6	215	5.3
Software products	2,250	7.5	94	7.8
Professional services	1,400	6.4	98	3.6
Turnkey	1,200	4.1	32	7.5
Total	7,000	32.6	459	5.6

† Profit margins after tax are presented in this report rather than the pretax margins presented in previous reports.

Source: Input, California.

ing house or one of the major distributors it is virtually impossible for a small company to get its product on to the shelves of computer stores.

Intel, one of the largest U.S. software distributors, says that it receives as many as 4,000 new programs per month for evaluation. Of those it chooses no more than 40 to distribute in its retail store customers.

Hot list

Softsel's "hot list," a weekly listing of top selling programs in the recreation, business and education categories gives a good picture of what is happening in the market. In recent listings, the vast majority of products listed in the top 30 business programs have been on the list for several months. The top three programs—Lotus 1-2-3, PFS-file and Multiplan have been close to the top of the list for nearly two years.

Even the "new" programs on the list are mostly from established companies. Lotus's Symphony, introduced in February, is number four. Ashton-Tate's DBase III is number nine. But there is still hope for the entrepreneur. Rising to the software "charts" is a program called "sidekick," the first personal computer business software hit for Boreland International of Scotts Valley, California.

The entry of IBM into the personal computer applications program market last September with a range of 31 business related programs has brought a new dimension to the industry. "It will have a tremendous impact upon every aspect of the business," predicts Ms Jan Lewis, senior analyst at Infocorp, a Cupertino, California, market research firm.

While initial reviews of IBM's business software have been mixed, few in the industry doubt that the programs represent just the first step toward IBM becoming a major factor in the software market.

In general, competition is getting stiffer, the market is less



Mr John Inlay (left), chairman of MSA, the world's largest independent software company, and (right), the man who invented the CP/M operating system, Mr Gary Kiddall, chairman and founder of Digital Research

forgiving. IBM's entry is going to make it more so," comments Mr Michel Kapor, president of Lotus Development, the leading U.S. personal computer software company.

Anxieties

Underlying much of the industry's concern about IBM's software introductions are fears that IBM may at some point change the "open system" architecture of its personal computers which allows software developers access to the PC operating system replacing (or enhancing) it with a proprietary operating system. This could reduce the opportunities for third party software companies in the key MS-DOS, compatible software sector which is estimated to be worth \$1.3bn this year.

The home computer software business is even more risky than the business sector. Recent "fire sales" in the U.S. have seen even well-known titles

discounted to a fraction of their original prices. Some major publishers have shipped large quantities of products to overseas markets—particularly Australia—in a desperate effort to unload programs.

As the Christmas sales season approaches, the home computer software market is taking on many of the characteristics of the market for video game cartridges two years ago. Retailers are overstocked with old titles and reluctant to buy new ones until they clear their shelves.

Publishers of games and entertainment software hope that a strong Christmas sales boom will refill their empty coffers. There is increasing concern, however, that Christmas '84 will not live up to the industry's expectations. Spinnaker Software, publisher of some of the most popular home computer programs, says that its sales of software for the top-selling Commodore 64 slumped by 40 per cent in September.

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A battle to attract investors

Software finance

JASON CRISP

"THE TROUBLE is the City does not understand something it cannot kick," complained the chief executive of one high flying British software company after a frustrating search for finance.

For years, software companies have been complaining about the problems of finance. Yet the very few software companies to have full quotes on the London Stock Exchange—such as Logica Microfocus and Systems Designers—also have some of the highest ratings in the electrical sector.

In the U.S., the fierce growth and subsequent shakeout in the personal computer industry has left many investors poorer and more wary of the dangers of the industry. For every Digital Research—Microsoft and Lotus—there are hundreds of software companies that failed to make their mark and many have gone out of business.

As Mrs Jacqueline Morby, general partner in T.A. Associates commented at a recent FT conference: "I feel a fundamental change has taken place for investors in high technology. From 1978 to 1982 a boom market was in existence caused by the use of the microprocessor in many different products plus the growth in the personal computer industry. "For venture capital, unheard-of growth rates took place. It seemed one could invest in any company and succeed. When there are rapidly growing markets, companies can succeed in

types of high technology companies ranging from new software ventures to biotechnology.

Mr Ben Rosen, chairman of Sevin Rosen, the venture capitalists, and also chairman of Compaq, the highly successful personal computer company, says: "After raising money in the United States in the order of \$30-\$40m a year in the 1970s, the new money raised last year was \$4.5bn. The amount invested in new companies was about \$3bn, so there still is a huge unspent amount of money, in addition to the new money in the billions being raised every year."

In Britain there appears to be far more funds available for high technology ventures than there were in the 1970s. In those days many of Britain's best-known software companies turned at one time to the National Enterprise Board for funds. (The state-owned NEB now merged with the National Research and Development Corporation as part of the British Technology Group.)

Software companies which have, at some stage, had NEB

finance include Logica, CAP, Arcom, Quiet and Percom.

Logica, one of the largest independent software companies, went public just over a year ago. The company floated about 30 per cent of its equity in a tender offer with a minimum price of 140p. At the time Mr Philip Hughes chairman of Logica said: "We have deliberately pitched this at what we consider a very modest price. Let the market decide what we are really worth."

It did. The offer was more than seven times oversubscribed and the price was struck at 220p and recently the company hit record trading at over 400p. The financing enabled some of the institutional shareholders to realise their investments, created a market for the employee's shareholdings, paid off overdraft and increased working capital to meet growth needs.

Full listing

The smaller Micro Focus achieved a full listing on the London stock exchange after a flotation on the unlisted securities market in May last year. Microfocus, which sells software packages to some of the leading microcomputer groups, found that the extra finance enabled it to speed up development which had been held back because of previous underfunding. With the finance, it was able to move to new offices and computerise many of its own operations.

The USM has become an important source of finance for a growing number of small UK software companies. Software companies which have joined the USM include Telecomputing, Rolfe and Nolan, Comsoft, Britnet and Consultants (Computer and Financial).

A recent review of computer companies on the Unlisted Securities Market by stock brokers Fielding, Newson-Smith noted that the software services companies were quite cheap compared to their equivalents with a full listing. The position was reversed in the case of software product companies which had a better rating on the USM.

The brokers commented: "The reasons for this apparent inconsistency we believe are to do with the perceived quality of earnings growth. Fully listed software services companies demand an enormous premium due to anticipated demand for such, broadly-offered services, but USM service firms are often perceived to have a dangerously narrow client base."

"Among the software product firms, the fully listed Microfocus enjoys a relatively modest rating for its explosive profits growth owing to the inevitability of product vulnerability. The USM firms enjoy similar ratings because, despite being smaller, they display a similar product profile and growth potential."

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Computerised examination system

THE CITY and Guilds of London Institute, Britain's largest technical testing and qualifying body, has computerised its examination administration processes with a system called Circe (Computerised Issue of Results and Certificates from Entries), jointly developed by City & Guilds and Software Sciences, City Division.

Circe II handles over half a million examination entries a year, plus related administration and fee work. Its implementation is intended to bring big savings in running costs, improvements in efficiency, notably in information processing and management, as well as offering greater flexibility in preparing and holding examinations.

Circe is a database orientated system, and the configuration, selected by Software Sciences, runs on a DEC VAX 11/780 with DBMS and FMS/2 forms-screen handling and handles interactive and batch processing.

RANK XEROX (UK) is to grant more than £600,000 worth of hardware, software and services to Cambridge University Computer Laboratory.

The grant is one of 13 being made as part of a £10m international programme, but Cambridge is the only recipient university outside the United States.

The grants provide each school with the Xerox Development Environment, an advanced software and hardware development system, used extensively at Xerox in university computer science departments and Xerox research centres.

Computer scientists and others will use this equipment mainly for research and teaching in the areas of distributed computing applications, programming languages, network architectures, and software development tools and environments. Other groups will use



THE Rank Organisation's Royal Lancaster Hotel in London has installed a multi-terminal "Champs" hotel management system to handle its reservations, front office and accounting.

The order for the 425-room hotel, which has one of the largest banqueting facilities in the capital, was placed following the successful

installation of Champs (computerised hotel accounting management processing system) another Rank hotel, The White House in Regents Park.

The system, worth nearly £200,000, runs on a dual Data General 3280 minicomputer and supports 26 terminals. It provides full back and front office facilities.

the equipment for research in medicine, management, artificial intelligence and office automation.

SANDERSON Computers of Sheffield has won orders valued at £500,000 for its own British-designed and made PICS integrated on-line financial and production control software system.

Customers for PICS, which is a PICK-based range of software packages, include Yorkshire Brick; Abbey Panels in the aerospace industry; Amson Plastics; Rittal in the electronics industry; Street Crane; Sherborne Poultes and a number of other

concerns in sectors including automotive products, goods distribution and local authorities.

"We are particularly pleased that our British product has been so well received in such a wide variety of markets," says Mr Paul Thompson, a Sanderson director. "The orders have included related Zehre micros from GA, and another similar ratings because, despite being smaller, they display a similar product profile and growth potential."

Sanderson Computers is a member of the Bramah Engineering Group.

READ THIS

"Perhaps it is unfair to single out the British failure in artificial intelligence when Britain has done so badly elsewhere in computing too. British VLSI is not formidable. British mainframes are not best sellers. With the exception of the British Development of the French language PROLOG, British programming languages have been inconsequential on the world scene.

The only reason for dwelling on the British example is that it demonstrates what it was like to have had everything in place to excel, and yet by mismanagement, by misperceptions, by *folies de grandeur* and other delusions, the British instead have demonstrated how to turn a nation from a winner into a loser. In England's tragedy there is an obvious lesson for Americans."

Professor Feigenbaum—a founding father of artificial intelligence—writing on the "Fifth Generation"

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Wealth Warning: Asking some people about Telecomputing's software may damage your wealth.



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High optimism in packages sector

THE BRITISH computer industry has always taken pride in the quality of its software. It is a justifiable pride because UK programmers, for the most part, are highly professional in their work methods and produce very good software indeed.

Yet many would argue that it is a misplaced pride, and has contributed to the sense of complacency which dogged the British computer business for so long.

The fact is that many other nations are just as good at writing software as the British, and at lower cost. "Off-shore programming" in India, for example, is one approach which has borne fruit for some companies. And while some write-off the Japanese for their lack of programming skills, others see their "fifth generation" computer programme as a vehicle for making up lost time fast.

Furthermore, the UK has proved particularly poor at marketing and exporting software. Among the few UK-written products which have achieved world-wide acceptance are Shadow II, a data communications package first developed by the Thomas Cook organisation; Wizard/System W, a financial planning system written by the UK arm of the U.S. Comshare organisation; CIS Cobol, a microcomputer version of the commonest business computer language, developed by Microfocus; and the banking packages Midas from BIS and Arbat from Arbat.

New pattern

Traditionally, the UK software industry has been made up of a large number of small to medium-sized companies earning a comfortable living by retailing software packages, often of U.S. origin, and installing software specially written (bespoke) to the customer's requirements.

Now that is changing as large and powerful companies start to emerge through growth and by acquisition from the pack.

The most recent survey carried out by the Computing Services Association (CSA), the trade association representing many of the top UK software and services companies, concluded: "The steady maturing of the computing services industry is evidenced by the continued growth in the size of the larger companies and the subsequent domination by them of both revenue (75 per cent) and staff employed (77 per cent)."

There are now five CSA member companies, employing

Developments in Britain

ALAN CANE

over 1,000 staff, as against two in mid-1983.

Over the same period a whole array of new companies were formed to exploit the market for microcomputer software, especially computer games. Names such as Alligata, Micro-mega, Quicksilver, and Scorpio are becoming well known in a way that few of the traditional software houses could have equalled.

There are clear signs, however, that this sector of the software market is over-leasing and that substantial rationalisation will reduce the number of companies participating in the near future.

Furthermore, it remains to be seen whether the best of these new companies—such as Psion, which started out writing superior games for the Sinclair Spectrum and graduated to developing integrated business packages for the Sinclair QL—can take on the spectacular U.S. start-ups like Lotus or Boland International at their own game.

For the medium-sized and

larger companies—traditional software houses such as Secon, CAP and Logica—the prospects for sustained high growth seem good. Indeed, just as in the early and middle 1970s, the chief obstacle to growth seems to be the availability of suitable staff.

Nevertheless, total billings for all CSA companies were more than £1bn between mid-1983 and mid-1984 with a growth rate well over 20 per cent.

The CSA comments: "With optimism running high, this impressive rate of growth will continue well into 1985, and shows every sign of gaining momentum to reach even higher levels in 1986."

The chief areas of growth for these companies was the software products sector—the production and sale of software "packages," pieces of software which have applicability across a wide spectrum of similar users.

Packages have assumed a growing popularity world-wide in recent years as the cost of having software specially written and installed has risen sharply.

According to the market consultancy, IDC, in the UK the share of the market held by bespoke software in 1981 was 29 per cent against 28 per cent for packages.

By 1984, the share held by bespoke software was only 27 per cent against 33 per cent for packages. By 1989, IDC expects the bespoke share of the market to have shrunk to 20 per cent, with packaged software claiming a 57 per cent share.

The principal independent packaged software vendors in

1983 were, according to IDC, MSA/Peachtree, the largest independent U.S. software and services company, Peterborough Software, Packaged Programs and BIS.

The UK market for applications software for business microcomputers is the largest in Western Europe at a little less than 120,000 units in 1983, and worth, according to the U.S.-based marketing consultancy Creative Strategies, about \$30m at retail prices.

It includes more than 44,000 units of accounting packages (almost by definition, microcomputer software comes as packages rather than bespoke programs), 33,000 word processing packages, 20,000 database management systems and 13,000 spreadsheets.

The prospects for accounting packages look especially bright. Creative Strategies notes that by 1988 the total UK business applications software market "will be expected to absorb almost 1m units, more than 400,000 of them as accounting packages."

New and sometimes unexpected retailers and distributors of both games and business pro-

grams have emerged as software has taken on the aspect of a commodity item rather than a specialist product. Earlier this month, for example, Marks and Spencer, Britain's biggest retailer, announced that it would be selling a range of computer software starting with a couple of games and a program enabling the user to create his or her own games.

So when the CSA has also picked up evidence of renewed vigour in UK software exports, it is understandable that there is considerable annoyance that the Government's Software Products Scheme has been one of the victims of a five-month moratorium on information technology spending, announced earlier this month by Mr Nigel Lawson, Chancellor of the Exchequer.

Since 1983 it has awarded over £10m a year to a variety of software projects. According to Dr Douglas Eyelions, director-general of the CSA, it has led to the development of software with a capital value in excess of £100m.

What are the reasons for all this new activity? According to CSA member companies, there is a clear message that 1983-84 is being seen as a period when business expansion began to pick up strongly, not

just within the computing services business, but across the economy as a whole.

Significantly it said: "Across the smaller companies, it is notable that the strength of the trend towards microcomputer solutions was seen as very important."

"It is also among the smaller companies that the positive impact of Government-sponsored schemes is recognised."

So when the CSA has also picked up evidence of renewed vigour in UK software exports, it is understandable that there is considerable annoyance that the Government's Software Products Scheme has been one of the victims of a five-month moratorium on information technology spending, announced earlier this month by Mr Nigel Lawson, Chancellor of the Exchequer.

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UK software vendors

Major independent packaged software suppliers in 1983:			
Company	Country of origin	Revenue \$m	Market share %
MSA/Peachtree	U.S.	10.0	5.2
Peterborough Software	UK	8.1	4.2
PPL	UK	6.4	3.4
BIS	UK	5.9	3.1
ACT	UK	5.6	2.9
DRI	U.S.	4.5	2.4
Thorn EMI	UK	4.3	2.4
VisiCorp	U.S.	4.3	2.3
MicroSoft	U.S.	4.2	2.2
Cinecom	U.S.	4.1	2.1
Other		133.4	69.8
Total		191.0	100.0

Source: IDC.

UK third party vendors

The top 15 third party vendors in 1983:			
Company	Country of origin	Revenue \$m	Market share %
Thorn EMI	UK	56.3	3.9
Geiseo	U.S.	43.5	3.1
Hoskyns	UK/U.S.	36.9	2.6
IBM	U.S.	36.8	2.6
Centre-File	UK	35.8	2.5
Scicon Int	UK	34.3	2.4
Logica	UK	31.7	2.2
CAP Group	UK	26.2	1.8
Barie	UK	20.5	1.4
Comshare	U.S.	19.2	1.3
ADP	U.S.	18.7	1.3
CMG	UK	16.7	1.2
Data Logic	UK/U.S.	15.7	1.1
SDL	UK	14.0	1.0
BIS	UK	12.9	0.9

Source: IDC.

More activity

W. H. Smith, in addition to its home computer activities, is establishing business computer centres. The Information Technology division of Thorn EMI, the electronics group, emerged as one of the largest software products businesses in Europe after adding EPS Consultants to its list of software subsidiaries, including Datasolve and Software Sciences.

What are the reasons for all this new activity? According to CSA member companies, there is a clear message that 1983-84 is being seen as a period when business expansion began to pick up strongly, not

Industry all set for further upheavals

CONTINUED FROM PAGE 1

Next consider Digital Research, a company which made its name and fortune by developing the operating system CP/M for 8-bit microcomputers—and so making business data processing on personal computers possible at all. (An operating system is software which controls the working of the computer itself; an applications program carries out a specific task for the user.)

Its rival, Microsoft, was chosen by IBM to develop an operating system for the 16-bit IBM Personal Computer. It retained first by developing an operating system, Concurrent DOS, which allows the IBM operating system to run within its envelope as if it were an applications program.

Now it has launched a new operating system that makes virtually any personal computer behave as if it was a Macintosh, screen icons, screen windows, pull down menus, mice and all.

What is more it is so designed that it can run any program designed for the IBM PC.

All of which tends to underline the view that there will soon be only two ways to carry out personal computing in the future, the IBM way (formal, professional, ordered) and the Apple Macintosh way (visual, simple, for the casual user).

Software houses will clearly have to cover their bets each way to stay in business; there was never any doubt that the IBM PC approach was here to stay. But despite the innovative nature of Apple's approach, the fact that Lotus, Digital Research and Microsoft all support the Macintosh (Bill Gates, chairman of Microsoft, played a significant role in the development of the machine) suggest it is more than simply the latest fad.

What is certain is that following the latest fad is no path to success. Viscorp, Lotus and other pioneers spawned a host of imitators which managed to secure venture capital only to

find the market window had closed.

According to Ms Jacqueline Morby of FA Associates, an important venture capital organisation, "these lookalike companies are often trying to address a very narrow window

"Lookalike companies are often trying to address a very narrow window of opportunity ... in an overcrowded market."

of opportunity where if there are any design or technical delays, any mistakes in marketing, any bitches in funding, it will be too late to succeed.

"Many of them get their products ready just in time to enter an overcrowded market."

Which explains why the future has suddenly turned so black for many of these entrepreneurial companies. But it is not only the entrepreneurs that

are in trouble. At the same time as Microsoft was going through the \$100m revenues barrier to set a new target for the competition to aim at, the mighty MSA was setting in motion new plans to divest itself of Peachtree, its microcomputer subsidiary.

It bought Peachtree as a short cut to the technology needed to establish communications between personal computers and mainframes, the so-called "micro-mainframe link." The problems built up when it moved into the personal computer software market.

It discovered that the management styles needed to control a major company selling sophisticated mainframe packages at up to \$100,000 a time and a small microsoftware company selling a high volume of packages at a few hundred dollars a time were very different.

Eventually it decided simply to go back to doing what it knew best. It has circulated a prospectus, and some 25 prospective buyers are said to be

Interested in acquiring Peachtree.

These trends can clearly be discerned in the U.S. and Europe; but what of Japan?

According to the International Data Corporation, Japanese software is at least three years behind that of the West; their operating systems lack the sophistication of the best U.S. systems and their standard applications software is unsophisticated and lacking in volume.

But the Japanese Government has established a software technology centre, the hardware industry has funded a Japan Systems Development Organisation and the Association for the Promotion of the Software Industry has formed a distribution centre. It has been easy in the past to dismiss Japanese software efforts, but not for much longer.

The Japanese already show skill at developing and programming computer games—and business software is only one kind of computer game.

Business decisions aren't always as simple as Black and Pink

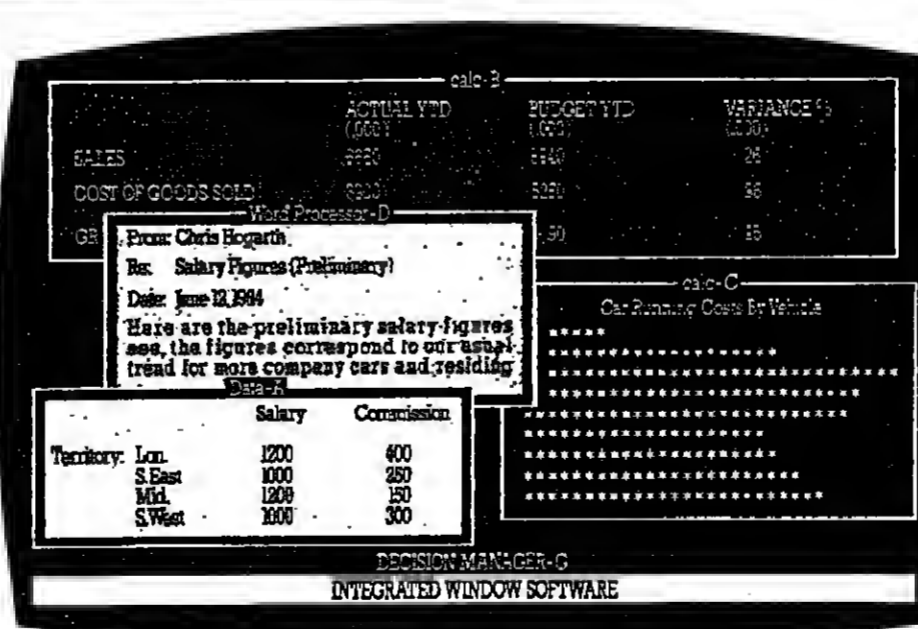
Making a business decision is never easy. All the options must be considered and time is always too short. Now Peachtree Software have introduced a completely new integrated program to help all managers make more effective decisions. Decision Manager caters for all the applications that a busy executive needs on his personal microcomputer and everything is totally integrated.

Data calculated on the Decision Manager spreadsheet can be displayed in a graphic format, included in a report on the executive word processor and electronically transmitted to Head Office—all at the touch of a few keys. Importantly, data can be accessed from the company mainframe, for use on the micro.

All applications are integrated into a single program and information from each area can be shown simultaneously on the screen in easy to use "windows." So for instance, financial data can be referred to on screen whilst the user is in the middle of preparing a letter. Up to 10 windows can be shown at any time, and the colour of text and backgrounds can be defined by the user.

Decision Manager includes six major modules:

- The Spreadsheet**
The prime tool for analysis of numerical and financial data, the Decision Manager spreadsheet takes the guesswork out of business planning. You can produce models for pricing strategies, profit and loss statements, or forecasting and can quickly explore alternative options and outcomes to help make the best decision.
- Word Processing**
Peachtree's word processing software is simple to learn and easy to use, so it is ideal for managers with no previous knowledge of computing. The system produces a wide variety of documents, allowing flexible drafting, editing and manipulation of text in report writing.
- The Graphics System**
Visuals can communicate much more quickly than columns of figures, so Decision Manager provides thirteen different graphic formats for presenting data from other areas of the program. Bar charts, pie charts, scattercharts and line graphs are just some of the alternatives.



- The Database**
An electronic filing system gives immediate access to personal, confidential records of all areas of your business. You can define the record format to suit your own requirements. Decision Manager offers one of the largest databases available in integrated software.
- Telecommunications**
The link from micro to micro makes it possible to transfer information within the building, or to other locations, to secretaries, colleagues, customers and suppliers, or to access public databases.
- Micro/Mainframe Link**
Using Decision Manager's unique mainframe link, you can draw data from a company's mainframe computer which supports the IBM 3270 series of terminals and utilise it within any area of Decision Manager.

Recruitment Methods
Midlands Division

Hotel Rooms Occupied

Decision Manager is a new concept in integrated business software from Peachtree, available immediately for the IBM PC XT or IBM PC with hard disk for around £625. What's more, in addition to the normal support from your local dealer, you get 90 days free telephone support direct from Peachtree to help you make even more of your new decision making powers.

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Computer Software 4

Excelling in games and graphics

INSTEAD of working in the quiet of an up-market office environment or out of a home garage, most Japanese computer programmers rub shoulders with thousands of others in a software factory owned by one of the major computer manufacturers.

There are also an estimated 2,000 independent software companies in Japan, mostly surviving on sub-contracted work to the major computer manufacturers.

The Japanese Ministry of International Trade and Industry (MitI) estimated software sales in the country to have been U.S.\$1.4bn in 1982. But it is not easy to put an exact figure on the size of the Japanese software market because computer makers, who also supply the majority of software, are reluctant to divulge the proportion of revenue derived from this source.

One of the reasons for their reluctance is that nearly their entire business is selling total computer systems, which are custom-made and therefore vary from one another in costs, making calculations difficult. Straight-forward software sales are small for the leading computer firms—¥37.7bn or 7 per cent of total computer sales for NEC Corporation and 10 per cent for Hitachi.

Custom-designed programs are still the norm in Japan, though there are those who hold the view that custom-made software, while it may be profitable, consumes too much time and manpower.

Benefits

Standardisation lowers production costs and increases the number of programs that can be used on a range of machines that share certain basic specifications. Making the machines compatible to a wide range of programs would help to raise the appeal of the machines.

But Mr Masao Matsumoto, manager of NEC's software engineering department, disagrees: "In theory," he says, "this is correct. But at NEC, we have found that it is not so profitable to mass produce stereotyped software."

NEC has developed tools to automate programming, using what it calls Systems Engineer's Arms (SEA/I) application software productivity system and Software Design and Management Systems (SDMS), according to Dr Kiyochi Fujino, general manager of NEC's software product engineering laboratory. Sony, Canon, Matsushita,

Progress in Japan

TERESA MA
in Tokyo

Toshiba are among 12 Japanese electronics companies making low-cost computers using the MSX standard developed by Microsoft of Bellevue, Washington and ASCII Corp., a Japanese software house and Microsoft's licensee in the Far East (Microsoft charges a licensing fee for the use of the basic computer language and a royalty fee for each machine produced with the standard.)

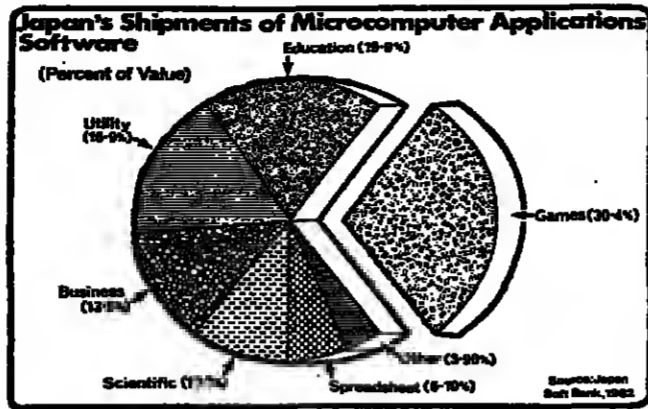
"In the 8-bit world, MSX has set a standard. The U.S. may realise a standard for 16-bit by June 1983 and we can have the kanji version of that ready two or three months later," said Mr Sam Furukawa, ASCII's general manager of research and development.

For the future, the Japanese Government would like to see UNIX become a standard for 16/32 bit processors, but some computer programmers consider the UNIX, which was designed by the Bell Laboratories to do scientific and technical tasks, too high-brow.

The Japanese have excelled at computer graphics, having cracked the difficulties of computerising the intricate kanji (Chinese ideograms) of the Japanese language. There is little competition in this field from foreign computer companies.

In addition, Japanese software manufacturers are in a good position to take over the largely untapped but potentially lucrative market in China.

Japan's immensely popular, slick video games are an outshoot of computer graphics design. Another software product that can cross the language barrier and perhaps find receptive export markets is technical programming for science and engineering. These



More than 28,000 programmers are involved in Japan's software industry. The number of programmers working for leading software suppliers are Nippon Denki Software (1,065); Nihon Business Consultant (1,350); Computer Service Kaisha (3,100), and Hitachi Software Engineering (1,450).

Research in Japan

Government R&D Grants for Software Development

Area	Ym	\$m
Fourth generation software	2,360	9.8
Software maintenance	846	3.5
Advanced General Purpose processing	940	3.9
Business processing	637	2.7
	4,777	19.9

Source: IOC Japan

programs are required to handle standardised technical procedures using drawings and numbers, rather than words.

An exception to Japan's ambition to export seems to be application software for use in office and personal computers. Work instruction manuals and programs have to be translated from Japanese and sometimes programs have to be rewritten to suit different working needs.

The different business environment in each country makes it impractical to simply translate programs into English or other languages. ASCII managers see much potential in the Japanese software industry for improving software imported from the U.S.

"The kind of domination Japan had in semi-conductors, audio-visual equipment, or automobiles would not happen in the field of Japanese software," said President Akio Gunji.

"But our enhancement work has been progressing more quickly than research and development in the U.S. We could sell it back." ASCII itself has developed the Japanese-language version of UNIX, called Kanji UNIX.

The company which began its business in publishing computer magazines in 1977, chalked up sales of ¥5,888bn in fiscal 1983 (ended March 1984), some 55 per cent of which was in software. Its projected sales for fiscal 1984 is ¥8.5bn.

Over 30 per cent of its software sales is programs for business personal computers but the big money is still in amusement games. It engages 40-50 people full-time in the software division and in addition, subcontractors four smaller software firms to write computer programs.

Japan's top computer makers—Fujitsu, Hitachi and NEC—want to create sophisticated software and are ready to spend more than ¥120bn on software research and development in 1984 alone.

In one year, between 1983 and 1984, NEC established five software subsidiaries in Japan, bringing the total number to nine. NEC also has a subsidiary specialising in software for auto-

mated fingerprint identification systems.

NEC Corporation ploughs back 11 per cent of revenue into research and development, according to a company spokesman who, however, declined to reveal the actual amount which goes into software.

Fujitsu, Japan's number one computer maker, with computer revenues of \$3bn last year, spends about a third of its nearly \$300m research and development budget on software. Hitachi is spending some 30 per cent of its research and development expenditure on software.

Much of the big computer makers' research and development efforts go into program development aids and are aimed at equipping the future fully-automated factory.

As a result, Japanese software is highly reliable. NEC pays dues to the company's quality-control circles for detecting and reducing the number of bugs and correcting defects in a program during design stage.

The Japanese Government, on its part, is helping to nurture the software industry by setting up several research and development laboratories and giving tax breaks and low-interest loans to software developers.

Legislation

Other things are required to assist the growth of the Japanese software industry. Legislation, for example. There is no law to protect computer software from unauthorised reproduction.

MitI wants to promulgate a new copyright law providing 15-year programme rights, to which U.S. lobbies have voiced protests, saying that the period allowed is far too short to be effective.

The issue has been particularly sensitive since the 1982 copyright dispute between International Business Machines (IBM) and Hitachi. IBM charged Hitachi with copying IBM software for sale together with Hitachi machines.

The dispute was finally settled out of court after Hitachi agreed to pay software licence fees and allow IBM to inspect its products before they were marketed. However, the Japanese computer manufacturers are also confronting copyright problems on the home front and numerous disputes are brought to court each year.

Western Europe market summary

Business Application Software, Unit Shipments and Revenue by Product Type 1983-84	1983	1984	1985	1986	1987	1988	% CAGR
Word-processing units	90.64	162.17	232.31	343.25	501.00	725.80	32
Word-processing revenue (\$)	16,298	24,714	34,035	45,392	59,796	78,179	37
Database management units	56.83	134.23	233.83	340.56	500.21	724.83	36
Database management revenue (\$)	20,620	44,929	67,527	92,466	122,023	168,933	30
Spreadsheet units	34.39	98.21	160.81	258.18	375.63	538.18	73
Spreadsheet revenue (\$)	5,551	15,114	23,964	33,166	43,789	58,837	59
Accounting units	67.92	158.08	285.19	421.26	602.57	1,003.87	71
Accounting revenue (\$)	21,330	46,688	88,194	101,404	140,287	193,053	55
Other units	9.13	15.08	23.54	36.53	54.89	81.43	68
Other revenue (\$)	1,110	6,114	8,586	11,993	16,747	21,634	30
Total units	238.97	557.77	964.37	1,396.78	2,084.29	2,974.14	64
Total revenue (\$)	68,469	137,474	202,216	254,421	382,142	608,706	48

† CAGR—Compound Annual Growth Rate.

Source: Creative Strategies International.

Fierce competition among 3,000 software concerns

West Germany

JOHN DAVIES
in Frankfurt

ONE OF West Germany's leading software houses and business consultancies, ADV/Orga F. A. Meyer, is about to go public with an issue of non-voting preference shares. The stock market launch is just the latest sign of the strong momentum in the country's data processing and computer software business.

An estimated 3,000 software concerns are active in West Germany, though many of them are small outfits run by self-employed independently minded individuals.

Despite savage competition, the whole field of data processing and software promises rapid growth rates and is an obvious springboard for a stock market launch.

ADV/Orga F. A. Meyer, founded more than 20 years ago, changed its corporate status to that of an Aktiengesellschaft (AG) a few weeks ago in preparation for its stock market debut, which is being organised by Commerzbank.

Headed by Herr Friedrich Meyer, ADV/Orga is based in Wilhelmshaven but has consultancy and software business throughout the country. With about 400 employees, the com-

pany lifted sales revenue 28 per cent to DM 55.3m in the business year to June 30 and made pre-tax profit of DM 5.2m.

It has increased its nominal capital by DM 3m to DM 13m and about two-thirds of the newly created shares are being offered to the public. The shares will be traded on the Frankfurt, Bremen and Hanover stock exchanges in the so-called "geregelte Freiverkehr" or second-tier market.

Nixdorf launch

As is often the case with companies being newly launched on the West German stock market, the public is not being offered ordinary shares but non-voting preference shares. This is in line with a widely held view in West Germany that family owners of businesses should retain control, rather than yield to outside influence, even though their companies make the transition to the stock exchange.

This was also the case earlier this year with the stock market launch of Nixdorf, the data processing concern headed by Herr Heinz Nixdorf.

Nixdorf's offer of non-voting preference shares raised the hefty sum of about DM 650m to pave the way for continued expansion. The company, which has strengths in both hardware and software, has set a target of doubling its sales in four years from the DM 2.7bn level of last year.

As the stock market upswing was strongly under way last year, the Munich-based SM Software was launched on the West German stock exchanges with an issue of ordinary voting shares. The concern was set up in 1980 by Herr Hans Beck, Herr Hannes Schliesel and Herr Josef Steiner, who had previously been self-employed programmers.

The company, involved in developing standard software for microcomputers, sold shares to the public at DM 200 each at its debut, which was organised by FIM Portfolio Management, the Munich-based financial consultancy.

In the first dealings on the stock market, the shares traded at DM 570. They later reached a peak of DM 670 but have since lost ground.

As it forecast at the share sale, SM Software paid no dividend for 1983, and in fact registered a loss of DM 640,000 on sales revenue of DM 2.5m. A dividend is also considered unlikely on this year's results.

A high proportion of West Germany's software concerns are concentrated in and around Munich in Bavaria, as well as in the neighbouring state of Baden - Wuerttemberg. Both these states have been keen to foster new high-technology industries and to promote the nearest equivalent to a German

CONTINUED ON PAGE 5

REM

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<p>WGL Construction & Project Engineers, Linden House, Moorgate, Rotherham S60 2AG. Tel: 0709 62534. Consultant for flexible manufacturing schemes and robot advisory services. Turnkey Contract Maintenance.</p>	<p>Fretwell-Downing Computer Group BMS CMI CMS MicroManager, Tel Sheffield 0742 682301</p>	<p>Pathtrace (North) Limited, Abbeyfield House, Blyth Road, Maltby, Rotherham S66 8HX. Tel: 0709 818472. Specialists in computer aided engineering.</p>
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Computer Software 5

Big shake-up in the market place

France

DAVID MARSH
in Paris

THE FRENCH software sector is leaping ahead with the same pent-up force as the micro-computer market itself. The explosive entry onto the personal and business micro-markets during the last two years of foreign companies in the form of Apple, IBM (with the PC) and Sinclair has ushered in a more dynamic and internationally-oriented approach among software suppliers and users.

For long hampered in its growth by users' reluctance to purchase programs not available in French, the software sector is now developing a much more healthy relationship with markets outside France.

To take just three examples of a shake-up in attitudes, Apple, which already has strong links with software companies and a large French-based dealer network, has set up a software production company in Metz in eastern France to develop programs for its new Macintosh computer.

Sinclair, which is studying plans to produce its ZX Spectrum and QL home computers in France next year, is making a big effort to commercialise French-adapted programs for schools use. The company, the leader in the French domestic computer sector (Sinclair's biggest market outside the UK), already has available 64 schools programs. These should assist its attempts to win a greater share of the national education sector which up to now has been largely the preserve of French companies led by Thomson.

Finally, on the software distribution scene, changes are also on the way. To meet burgeoning demand for more variety from PC users, Softsell, the Californian company which is the world's largest distributor of professional and recreational software, has recently set up operations in France.

And another sign of a flow of ideas from across the Atlantic is the setting up just outside Paris of a new French software distribution group, Arxone, modelled on a leading U.S. software publisher, Microsoft.

Paribas, the nationalised investment bank, has a stake in both ventures.

All this activity has hardly been without effect on France's battery of computer services companies (SSII), which specialise in providing software and general information technology expertise for the professional sector.

The French service companies are the generally accepted European leaders in this field. Over the last decade they have become an important support for the overall French data processing industry—helping to compensate for disappointing performances in the hardware sector.

Problem solvers

According to the annual survey of the specialised French magazine *Temps Reel*, the largest French SSII increased turnover by 22 per cent in 1983 to FFr 13,000, a slightly lower growth rate than in 1982. Over the last decade, around 93 per cent of overall computer service turnover comes from "intellectual services," such as consulting and specific problem-solving work. Sales linked to hardware—using of specific equipment or networks—makes up only 30 per cent.

The top French group, Cap Gemini Sogeti, last year realised more than 50 per cent of its turnover outside France, above all because of strong expansion (and the effect of the soaring dollar) in the U.S.

For the top 50 as a whole, however, 70 per cent of turnover comes from France and only half the group are present outside the domestic market.

The computer service companies in their business relationships with the Government and public sector companies have never profited from the systematic "buy French" support given in past years to the French hardware sector, focused on the now-nationalised Bull.

Indeed, it was an American company, Computer Science which in 1970 received the first government order for analysis of a specific computer project. And the SSII sometimes complain that Bull is too often likely to offer the administration its own software package in association with an equipment deal, cutting the service sector off from a possible source of orders.

None the less, the SSII owe a certain amount to public sector contracts. Cap Gemini Sogeti, for instance, has put into place the software for the electronic telephone directory videotex system gradually being introduced in French homes by the French telecommunications administration (PTT). And Steria has done a similar job for the Teletel electronic information project developed by the PTT in the Paris suburb of Velizy, aimed to serve as a forerunner of a nationwide system.

This activity can offer a springboard for important foreign orders. Cap Gemini Sogeti, for instance, has just won an order from the Norwegian PTT to supply software for the country's planned public videotex system, in association with the U.S. company Tandem which is supplying the hardware.

And Steria similarly clinched a FFr 35m deal last month to supply a videotex system for the Australian news agency cooperative, enabling 1,300 vendors in 13 towns to order newspapers and books and keep up-to-date records on stocks and accounts.

SG2, the No 3 French computer service group controlled by the nationalised bank Societe Generale, has also been building up international business. It was selected by the EEC to develop a pilot network

French software vendors

Major independent packaged software vendors in 1983:

Company	Country of origin	Revenue \$m	Market share %
Sema	France	11.5	6.3
CGI	France	9.6	5.2
Steria	France	9.5	5.2
SESA	France	7.5	4.2
TTTN	France	5.7	3.1
Ciacom	U.S.	5.6	3.0
Computer Associates	U.S.	5.0	2.7
Sopra	France	4.1	2.2
SG2	France	4.0	2.2
SFI	France	3.6	2.1
Other		117.4	63.8
Total		184.0	100.0

Source: IOC.

throughout Europe to build an information exchange system as part of the Community's Espirit programme.

SG2 is also playing a major part in furnishing software for electronic funds transfer systems. It has already exported to Taiwan know-how developed in the experimental French point-of-sale shopping terminals scheme at Saint Etienne in SE France.

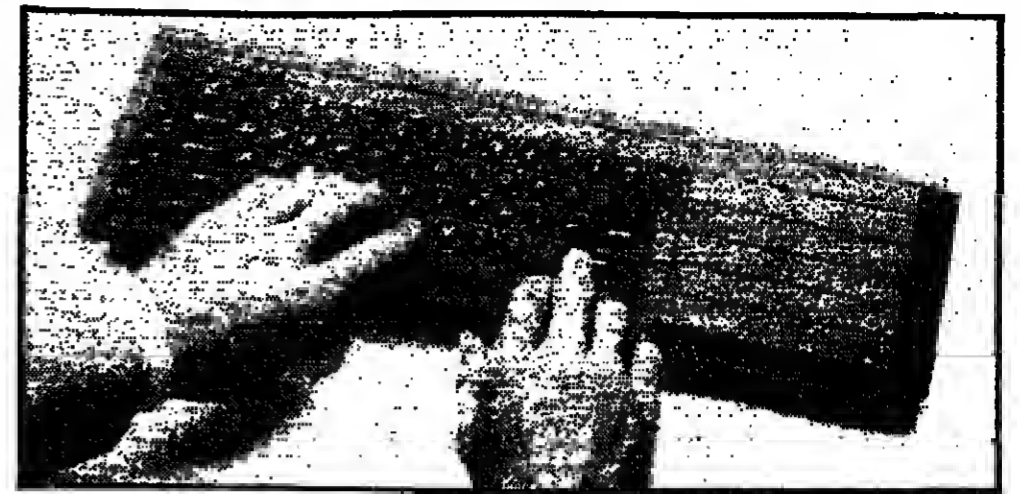
Elsewhere in the computer service sector, the air has been humming with restructuring activity designed to put the companies on a sounder footing to tackle international competition.

GSI, the computer services

subsidiary of the nationalised Compagnie Generale d'Electricite group, is at the centre of a controversial plan to rationalise SSII which are already part of the CGE and Thomson empires (including Silgos and possibly Sema) into a new and more powerful group, GSI itself earlier this year forged a technological link with Rank Xerox of the U.S. to develop artificial intelligence systems.

In another sign of international diversification, it has just opened a Swiss subsidiary specialising in giving bank clients instant access to financial and investment data.

In France, the SG2 has con-



Sinclair's QL, supplied with its own powerful, integrated software suite, written by—and licensed from Psion. Sinclair is studying plans to produce QL computers in France next year and to commercialise French-adapted programs for schools.

solidated its position by taking over Ordina, a medium-sized SSII (ranking 22nd in the 1983 listings) which also has considerable expertise in the banking field.

In another regrouping, Segin, computer service subsidiary of the Credit du Nord bank, has taken a 46 per cent stake in Systems Laboratory (Syslab), a specialist systems company which has built up particular expertise with IBM equipment in banks.

Flotation

CCMC, the 6th ranking computer service group meanwhile has just become the first of its number to seek a bourse quotation, following its flotation on the unlisted section of

the Lyons stock market at the end of last month.

Cap Gemini Sogeti, which with profits last year of FFr 72m, on FFr 1.4bn turnover, would be a sure hit with investors, has indicated that it could eventually seek a bourse flotation too, although it has no plans at present.

On a less bright note, Cap Gemini's rival in second place in the SSII listings, CISI, owned by the atomic energy commission CEA, has just underlined that not all foreign expansion leads to profits.

Following losses of FFr 108m last year, partly due to a FFr 30m deficit at its U.S. subsidiary Wharton Econometrics acquired in 1983, CISI is undergoing a thorough reorganisation.

The CEA is injecting FFr 100m in capital and is actively soliciting outside partners to take over CISI activities outside its main-stream business. CISI (in contrast to the overall position in the sector) last year drew 70 per cent of its turnover from equipment-linked business such as hiring out time on its computers to outside users.

Falling demand for this type of activity helped account for last year's problems. And CISI now has to struggle to join the trend already established by Cap Gemini Sogeti of building up higher value-added business in consultancy and analytical services to industry and commerce.

West German software vendors

Major independent packaged software vendors in 1983:

Company	Country of origin	Revenue \$m	Market share %
Software AG	W. Germany	9.5	3.8
SAP	W. Germany	9.2	3.6
ADV/Orga	W. Germany	8.7	3.4
Softlab	W. Germany	6.7	2.6
Cincom	U.S.	6.6	2.6
Computer Associates	U.S.	6.5	2.5
ACI/UCC	Switz./U.S.	5.2	2.0
ADR	U.S.	4.5	1.8
Vistop	U.S.	3.5	1.4
MicroSoft	U.S.	2.1	0.8
Collinet	U.S.	2.6	1.0
Other		190.6	74.2
Total		257.0	100.0

Source: IOC.

Fierce competition

CONTINUED FROM PAGE 4

"Silicon Valley." But West Berlin, too, has been taking many initiatives to attract and finance innovative concerns.

West Berlin was the scene recently of the first large-scale congress devoted primarily to the software business in West Germany, known as *Compas 84*.

This congress served to highlight the steeply rising demand for software in West Germany and the difficulty of speeding up the provision of software solutions to problems through such means as software engineering.

There was also stress on the need for "user-friendly" software to smooth the process of worker re-training as computer systems become more widespread in West German workplaces.

As elsewhere, software is becoming an increasingly large part of the outlay on data processing in West Germany. At present software is estimated to account for about 30 per cent of the total expenditure in this field, but by the end of the decade it is thought the proportion might approach 90 per cent.

Because of the cost of hardware and software and the sometimes bewildering array of alternatives, many users are looking more to concerns which can provide or advise on data systems including software.

One leading management consultancy and software house, Roland Berger, has estimated that the amount of money spent in West Germany this year on advice about data processing and software will exceed the amount spent on classic management consultancy and that the gap will widen in the next few years.

According to the Frankfurt-based Diebold management consultancy, most companies are still not aware of the significance of data processing as a way to strengthen their earnings and competitiveness.

In a recent study, Diebold also said that a lot of applica-

tion software in use in West Germany originated in the 1970s and was no longer appropriate because of the development of more powerful and complex systems.

With West Germany becoming more concerned to make headway in information technology, there is growing emphasis on computers and elementary software in schools. Dr Roland Schwetz, a senior Siemens executive, recently referred to software technology as the basis for future economic success. He said that experience with computers and software should be provided as quickly as possible in all areas of education in West Germany.

Although local concerns provide much data processing software in West Germany, U.S. and UK companies also have a strong hold, particularly in supplying standard products and services. Foreign companies which have been benefiting from fast growth in the U.S. and the UK are being increasingly attracted by prospects that the West German market is gathering momentum.

Expansion

Microcom of the UK has just set up its own subsidiary in Munich to carry out marketing in West Germany, Austria and Switzerland, with emphasis on its Cobol software tools for microcomputers and personal computers.

Last year Microfocus earned 88 per cent of its sales revenue in the U.S., 27 per cent in Japan, 13 per cent in the UK and a further 2 per cent elsewhere. The company sees considerable scope for improvement in Europe, according to Herr Erik Tomassen, general manager of the Munich subsidiary and a data processing and marketing specialist formerly with Siemens and Nikdorf.

Eschtron International is also pressing sales in West Germany through its link with RHV Software Technik. Its distribution network includes the Metro supermarket chain, as an outlet for microcomputer software.



Most software companies assume you look like this.

There are plenty of software packages around to help control businesses. Most of them do some of the things you require very well indeed.

The trouble is, different discs for different jobs can be rather a handful. You need one for word processing, then another to display spreadsheets.

One for database, and another for graphics, and so on. Each with its own set of commands.

Lotus Symphony does it all on one disc. Single handedly you can do sales forecasts, ad-

just profitability, juggle with inflation, then put the answers in a letter and send it to addresses taken from the database.

And if you don't like figures, it will turn them into bar charts, pie charts and half a dozen other charts. All in glorious colour.

Window management lets you put all the functions on screen together. A change in one window can simultaneously take place in another, you can zoom in and out and even shuffle the windows around.

What is more, with add-in applications, Symphony can grow with you, so there are no limits to its uses.

If, however, your needs are simpler, you can choose Lotus 1-2-3. It handles most office requirements (spreadsheet, graphics and database) on, of course, one disc.

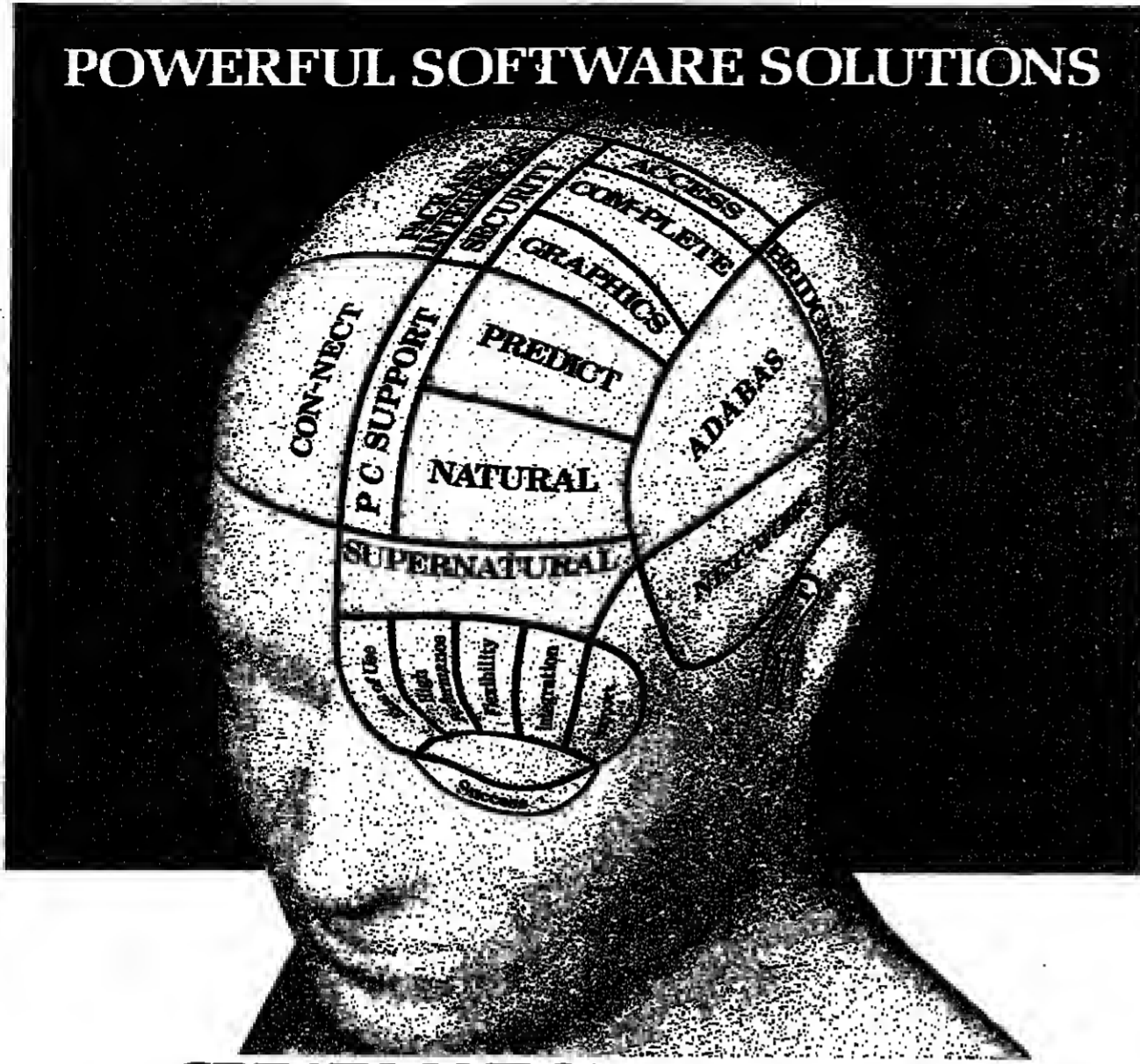
Because one thing Lotus always assume, is that you only have one pair of hands.

For further information on Symphony and Lotus 1-2-3 (still the biggest selling software package in the world) call Teledata on 01-200 0200. **Lotus**

SYMPHONY AVAILABLE FOR THE IBM PC AND XT COMPATIBLES. LOTUS 1-2-3 AVAILABLE FOR THE IBM PC AND XT COMPATIBLES, DEC RAINBOW, VANG PROFESSIONAL AND TI PROFESSIONAL COMPUTERS. 1-2-3 and Symphony.

Computer Software 6

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New techniques hold the key to the future

A NEW and powerful emphasis on software engineering over the past few years serves to illustrate the extent to which the computer industry is taking its own medicine. Using computers to aid in the design of the complex circuitry, written on to silicon chips or in the layout of printed circuit boards is comparatively commonplace, these days. What is new is the trend towards using these computer-aided design techniques in the construction of complex and sophisticated software.

Software engineering
ALAN CANE

To the lay person, such an approach might seem only commonsense, but in the computer industry, where the construction of large suites of software has always been regarded as akin to a black art, it is quite revolutionary.

Mr Roger Crabb of the U.S.-based services firm Computer Sciences Company noted in a recent report: "Software engineering techniques are primitive. Most software is still developed with no formal methodology, the software development process is poorly supported by automatic tools and the testing process often consists of trial execution with sample data chosen almost at random."

"As a result, the software is unreliable and there is no guarantee that the results given by the software are correct."

Poor record

A pretty damning indictment, but fully justified by the software industry's fairly awful record of completing projects on time and on budget.

The UK-based consultancy Pactal discovered, from the results of a study it carried out in 1984 into more than 200 UK software projects, covering all types of application, that two-thirds cost more than budget. More than half failed to meet their deadlines.

It was a depressing discovery, but hardly surprising. In the early 1960s when IBM was in the latter stages of developing its System/360 family of computers - certainly the most significant development in commercial data processing history - it estimated its costs at \$675m of which \$35m was to be spent on software development.

The software programme was plagued with problems and within two years the estimated cost had been raised to \$80m. At first it was thought some 200-300 programmers would be required. Emerson Fugh, an IBM research scientist, wrote: "By the end of 1965 there were 2,000 programmers working on System/360 software at a cost of over \$80m a year, causing Fred Brooks (the manager responsible) in frustration to assert: "Adding manpower to a late software project only makes it later."

Mr Brooks had stumbled, through hard experience, on one of the basic truths of software development; more than a decade passed before Mr Laurence Putnam, then an adviser software budgets to the U.S. Department of Defence, was able to show, first empirically and then by detailed mathematical analyses, that the development; more than a suites follows a common pattern.

He found that there was a

distinct limit to how quickly a given software project could be developed, given that three or more people were involved that the project would take at least six months. In other words, large projects take time. And trying to take them to completion too quickly by throwing in more staff does more harm than good.

Mr Putnam has now computerised his model of software life cycle management. Called SLIM, it is an important software engineering tool.

So what is software engineering and why has it suddenly assumed such importance? The UK Government's Alvey committee on advanced computing, after all, picked it out as one of the key enabling technologies for the future, while many companies, from the massive GEC downwards, have established departments to develop software engineering expertise for their own use and to sell to others.

One of the most recent additions to this list is the UK computing services company Logica, already noted for its work in datacommunications software, especially in the financial sector.

The Logica project is called Sesame. According to its manager, Mr Keith Southwell, the aim is to discover ways of producing software more cheaply and "less riskily." He expects to be able to achieve, in some cases, a ten times improvement.

The basic aim in all software engineering research is to find ways of producing software in a more reliable, more professional manner. This becomes increasingly important as the size of the piece of software becomes larger.

A typical computer game, for example, may consist of a few hundred lines of computer language. Software engineering techniques need not be used for such a task although they could certainly make it easier.

One of the major personalities in software engineering, Mr Edward Yourdon, defines four classes of project.

● First, the simple - those involving up to 10,000 lines of computer code and requiring three or four programmers for six to 12 months. (Note: even simple projects fit into Laurence Putnam's SLIM model.)

● Next there are difficult projects involving 10,001-100,000 lines of code.

"There is a non-trivial danger," Yourdon asserts "that the project will be finished several months late and that it will exceed its budget by tens of thousands or even hundreds of thousands of dollars."

● Hair-raising enough for most,

but Mr Yourdon goes to to define complex projects involving up to 1m lines of code ("even the most battle-scarred veteran would admit to a certain amount of nervousness") and the nearly impossible: "There have been only a handful of projects involving between 1m and 10m lines of code. Conventional techniques end e conventional project life cycle are almost guaranteed to fall with projects of this magnitude."

What is driving software engineering specialists like the Wang Institute in the U.S., Imperial Software in Britain and individual companies such as Systems Designers and Logica is the acute realisation that the difficult to nearly impossible categories define much of the critical software that will have to be written for tomorrow's telecommunications, financial, retail, defence and other systems.

According to Mr Roger Crabb of CSC, there are two fundamental approaches to software development: functional decomposition and modelling.

Functional decomposition emphasises the early definition of system requirements and the breakdown of the overall problem into a series of sub-problems. As examples of this approach, Crabb chooses McAuto/IST's "Stradis" Arthur Andersen's Method-1, BIS's SSD, Softech's SADT and CSC's DSDM-II.

User's world

Modelling, Mr Crabb says, involves the need to build a logical model of some view of the user's world; these can be either data models which have no concept of the passage of time or process models which describe the real world in terms of process entities and their connections.

So-called "fourth generation" languages are becoming increasingly important for system design and the automatic generation of computer code. One example is DMW Group's USEFT; Sperry's Mapper and Burroughs' Linc are others. James Martin, chairman of the DMW Group and one of the computer industry's more significant communicators said at its launch: "When people in the year 2,000 look back on what we're doing today they will regard our programming techniques as being rather like an engineer building a bridge without stress calculations."

Most software specialists are agreed that there is no universal panacea which can solve the problem of managing the development of large software projects.

A common approach, therefore, is to assemble a portfolio of methods and software production tools (editors, fourth generation languages and so on) which can offer something to most projects.

The work of these groups is probably the most vital in computing today; on their efforts depends the success of every major data processing project for the foreseeable future.

"Training and selection of computer personnel. MSC, £2.50.



MSA (Management Science America) has the largest software education centre in Europe and offers training for 200 people a day in the UK with 50 on-line terminals. MSA became the largest independent computer software company in the world with more than 12,000 systems in use through its dedication to the sales of business packages for accounting, purchasing and so on. MSA has training centres in Maidenhead, Berkshire, in the UK, and at Brussels, Belgium, and Rind, and at Brusse.

Many UK employers have not yet started to select or train staff for vital computer skills, according to recent reports

Industry faces big challenge

FEW THINGS could be more important to any organisation than the task of ensuring that its key jobs are done by people with the aptitudes and developed skills to do them well.

The task would seem to be especially important in the computer field today when most authorities are forecasting that new information-processing technology will have spread into almost every branch of business and public services by the end of the next 10 years, if not within the next five.

The communications technology - which might be viewed as a hyper-advanced version of reading, writing and arithmetic - is at a stage comparable with that reached by the traditional "Three Rs" around the ninth century BC.

Their use had previously been confined to small enclaves of esoteric specialists who, since no one else could understand and manipulate the symbols involved, could be content with being equipped to communicate with one another.

From the time the Phoenicians developed a more easily learnable and usable alphabet whose symbols recognisably related to the basic sounds of everyday speech, however, simply possessing the techniques of the Three Rs became less and less effective as a means of earning a living.

For anyone wishing to go on prospering, that meant learning to understand not just the techniques of communication, but also at least some of the activities which ordinary people communicate about.

Evidence that software staff are now facing a comparable challenge has emerged recently from a study sponsored by the Manpower Services Commission. The survey covered more than 500 organisations employing programmers, analysts-programmers and systems analysts in Britain as well as institutions providing relevant training.

They were consistent in the view that such staff would need far broader knowledge and skills in future.

set and flourish in jobs as programmers although they have no pass grades in the less demanding 16-plus exams, let alone at Advanced level.

What is more, if people's results at A level testify to their respective intellectual abilities, then the same people's performance in their subsequent degree exams seems to testify to something else because the two sets of results are not correlated.

Given that software staff will increasingly need broad understanding of business and other practical activities, employers' prospects of obtaining the right people will only be lessened by continuing insistence on A-level passes.

It will lead parents to maintain their pressure on schools to leave aside the development of pupils' practical abilities so as to concentrate on pushing them through exams in ever more specialised academic subjects which, as the British Institute of Management among others has lately complained, is limiting the practical usefulness of young people leaving our educational system.

The waywardness of the prevailing selection habits is further emphasised by the survey's finding that the employers' main complaint was that new recruits were deficient, not intellectually, but in the necessary so-called personal qualities.

But, the report adds, "despite this emphasis on personal qualities there is no evidence of any systematic attempt to assess these qualities" apart from interviewing which is notoriously unreliable when it comes to pinpointing personality traits.

To cap it all, in almost 40 per cent of the employing organisations the software staff were not offered any formal training at all.

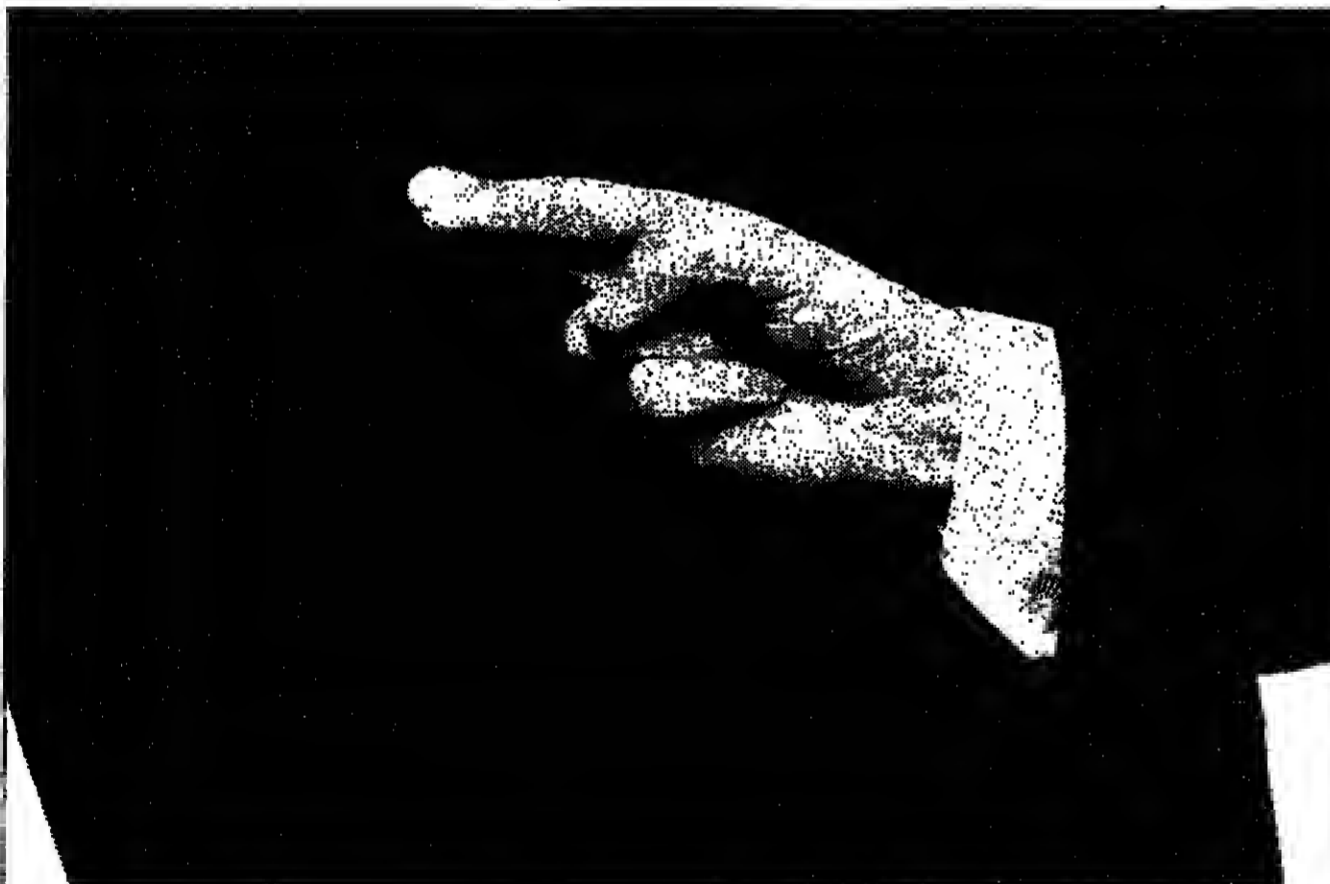
Hence the report's conclusion that the survey's findings



Mr George Fennay, the careers projects manager at the National Computing Centre, points out that there is a crisis facing UK information technology, due to the lack of attention paid to the mounting problem in the past 15 years.

"Since Japan became a threat in this, as well as in other high-technology industries, we have had Information Technology year in 1982 and Alvey. U.S. domination before that apparently went unnoticed... but the IT boat won't wait," he says.

are "alarming and challenging at the same time" the most urgent challenge to the British computer industry being to lose no time in becoming at least as systematic and rigorous about selecting and developing its live ware as it is about its software and hardware.



What some people do when they buy a computer.

Buying a computer that's right for your business is often a matter of luck.

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Computer Software 7

Fierce debate within IBM community

Major third party vendors

Western Europe's top 10 vendors in 1983:

Company	Country of origin	Revenue \$m	Market share %
IBM	U.S.	278.0	3.8
SGS	France	144.7	1.5
Cap Gemini Societ	France	139.1	1.5
GBI	France	128.8	1.4
Geisec	U.S.	112.9	1.2
Seicon Int.	UK	118.4	1.2
Datav	W. Germany	108.9	1.2
CHC	France	98.0	1.0
CCWC	France	83.9	0.9
Telestratus	France	77.3	0.8

Source: IDC.

Good news for users

Micro operating systems

PHILIP MANCHESTER

AS THE awareness of computing has increased, the importance of software in computer systems has increasingly come to be recognised. Software is the mechanism whereby a pile of electronic circuitry is persuaded to do something useful for us.

Whether it be a word processing package, a large payroll system or a satellite control system, the system that makes the computer world go round is software. Furthermore, the financial investment in software is now seen as being far greater than that in the hardware used for its execution. It is estimated that in the U.S. alone \$20bn per annum is spent in just maintaining those programs.

Users of computer systems have built programs to perform certain tasks relevant to the way their business works and wish to preserve that investment.

At the same time, computer manufacturers are anxious and indeed obliged to sell evermore sophisticated technology to im-

prove the way these systems perform, as well as catering for their inevitable growth.

The key to reconciling these two seemingly opposing ideas is a piece of software which sits between the user's own programs and the computer. It is called, loosely, the "operating system" and it has been used by computer manufacturers quite successfully to move computer-users across increasingly sophisticated computer systems without sacrificing the substantial investment they have made in their own software.

All computers have operating systems and the bigger the computer, the more it is expected to do. In a small microcomputer, the operating system is confined to providing ways of organising and accessing data.

On a large mainframe, it will not only be expected to do all of that, but it will also be charged with controlling the terminals connected to the computer, sharing out the computer time and a whole host of other things.

Generally speaking an operating system is a piece of software that looks after all of the internal needs of a computer system—all of the things that the user is not interested in and does not want to know about.

Unfortunately, this does not mean that we can forget about them. Operating systems also

what happens outside of the computer as well.

The number of terminals a computer can support, the size of the database it can handle and the efficiency of the system as a whole are all dependent on the operating system.

In mainframe computing at the moment, there is mounting concern over the future of operating systems. Nowhere is this more fiercely debated than in the IBM community.

Although IBM did not invent the operating system, it most certainly enshrined it as an important component in a computer system. When IBM launched the 360 computer 20 years ago, it established a standard operating system. And with the same shrewdness that prompted IBM to call its business microcomputer the Personal Computer, it called its operating system, Operating System 360/OS among engineers and programmers.

High pressure

Despite many changes in the hardware of its computers, that same piece of software—now much enhanced and extended—still exists on the medium to large IBM computers of the 1980s.

The reason for this goes back to the purpose of operating systems as described above. It was the only way that the user's software investment could be protected while moving the

Mainframe operating systems

PHILIP MANCHESTER

pressure from IBM for them to move to the larger and more comprehensive MVS. Cynical observers of IBM suggest that such a move means that IBM can sell more large-size machines and derive even greater revenue from hardware sales. But that view is only part of the story. The fact is that as long as IBM has to support two main operating systems it is spreading its resources too far and holding back further development on both.

Complications

If that were not enough, IBM also has another system called Virtual Machine (VM). Although this is not, strictly speaking, an operating system in the way that MVS and DOS are, it can achieve many of the same things and, therefore, complicates the situation even further.

The concept of the Virtual Machine is quite simple—it allows a single computer to pretend to be several computers. Software running in the virtual machine, conceptually, has a whole machine to itself.

This means that an MVS operating system and DOS operating system can, theoretically, sit side-by-side in the same computer—each within their own virtual machine. In light of this knowledge, it is no surprise that IBM is keen to bring its DOS-users on to the VM bandwagon. A significant

number of users have already made that move. It is estimated that half of the DOS-users in Europe are running VM systems and this trend is gathering momentum.

Having wooed the DOS-user to VM, it should not be so difficult to complete the move to MVS—allowing a transition period where both systems can be used.

At the same time there is growing dissatisfaction in the IBM-user community over the complex and now somewhat out-of-date ideas embedded in MVS. So, even if IBM succeeds in its goal of bringing all its users on to a single operating system, it will still need to address that problem.

If it does not do this—while, at the same time, preserving the substantial investment that users have made in application software—it could well see other alternatives being tried by IBM-users.

Although experts do not generally see Unix as competition for MVS (the two systems have entirely different backgrounds and priorities), a warning note was sounded at a recent European user-group meeting.

A number of users expressed a desire to discuss IBM's policy on Unix (to all intents and purposes, IBM does not have one). This is the first time that AT and T's Unix operating system has even been mentioned in such a context. It will not be the last.

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Services in Western Europe

The top 10 professional services vendors in 1983:

Company	Country of origin	Revenue \$m	Market share %
Cap Gemini Societ	France	137.3	3.7
Seicon Int.	UK	84.5	2.3
SGS	France	81.8	2.2
SESA	France	52.3	1.4
Sema	France	50.3	1.4
Volpac	Netherlands	45.3	1.1
Steris	France	39.2	1.1
Telesystems	France	34.5	0.9
Legia	UK	34.6	0.9
Datema	Sweden	32.2	0.9

Source: IDC.

Computer Software 8

A mandatory buzz word of computing

THE golden rule of the seventies was: base your software purchases on the CP/M operating system, because every application you will ever need works on it.

The rule of the early eighties was: buy MS-DOS for exactly the same reason, and the additional one that IBM says so. And for the mid-eighties?

Integrated software

CLAIRE GOODING

Here it is: Never, but never, get caught putting your data in more than once. Data capture is tedious enough the first time round.

Hence the new mandatory buzzword of computing: the integrated software package. The word "integrate," like most vocabulary adopted by the computing fraternity, has assumed its own meaning without losing its essence. The main aim of integrated software is to make programmes work together harmoniously, with as little trauma as possible when making the transition from one function to another.

Historically, even the most flexible software has been extremely limited in its environment. For example, however happy a user is with a single-user payroll package, it may prove impossible (or expensive) to take that particular application and run it on a machine with a different multi-user operating system.

Time was when every application had its own data, written into it as the programmer saw fit at the time. Then along came the database—a pool of common data which can be used in many different programmes. Many package vendors integrate their applications this way, perhaps passing data between a stock and an accounts system via a database.

The database makes it easier to traffic data between programmes, but you have to be sure that you pick a database, or a range of packages, which will not limit your system in the future.

Database techniques paved the way for integrated applications but there are still protocols which defeat the movement of data from one environment to another. The classic example is the "standalone" microcomputer user, who may have to spend hours typing in data taken from a mainframe printout. Instead of being able to "hit" the data ready-made.

Thornier problems arise when you want to use data for something other than its original purpose. That can happen easily once the computer has become part of the office routine. Users start to look beyond the scope of their present software, and wonder what other jobs can be

computerised.

For example, take the 80 per cent of IBM Personal Computer users who are said to have bought the machine solely to run spreadsheet programmes, (primarily the 123 programme from Lotus Development Corporation). Unless they have bought with unusual foresight, they come up against the usual barriers once they start to spread their hi-tech wings. The spreadsheet bought from A doesn't work with B's accounting packages, or C's word processor, and so on.

Software vendors have quickly become wise to this, and several have produced integrated "suites" of packages which can work together sharing the same data.

One such company, the software giant, MSA, has even linked its accounting software to Lotus' 1-2-3 spreadsheet.

Co-operation

Now that IBM has entered the applications market, more independent suppliers might "join hands" this way, co-operating in the face of competition.

One approach to integration is the "windowing" of tasks. IBM's own rather late implementation left the field clear for other products: VisiCorp's VisiOn, complete with applications, the Windows product from Microsoft, originator of the PC-OS operating system, and the ingenious Concurrent CP/M, which opens the doors between CP/M and MS-DOS applications.

Lotus Development Corporation promised to supply the next milestone in integration with its new product Symphony, the follow-up to the 1-2-3 spreadsheet. Symphony, starting with

the established spreadsheet principle, brought new elements into the environment—communications, word processing, and other facilities, so that all elements could be used together.

Lotus chose the name Symphony to portray the user as a conductor of many different parts. But, as even the favourite reviews suggested, most people find it hard enough to play one instrument without having to understand the entire score.

Although it has been praised for the way it spends up operations and provides more control over information, Symphony has so far failed to sweep the board as did its forerunner Lotus 123. Lotus 123 was superbly easy to use. Manoeuvring between environments demands rather more versatility.

Getting to grips with any new computer tool is like learning a foreign language. You have to learn some "grammar," whether you aspire to write poetry or simply need to understand the road signs. A product as ambitious as Symphony has to cater for both sorts of user.

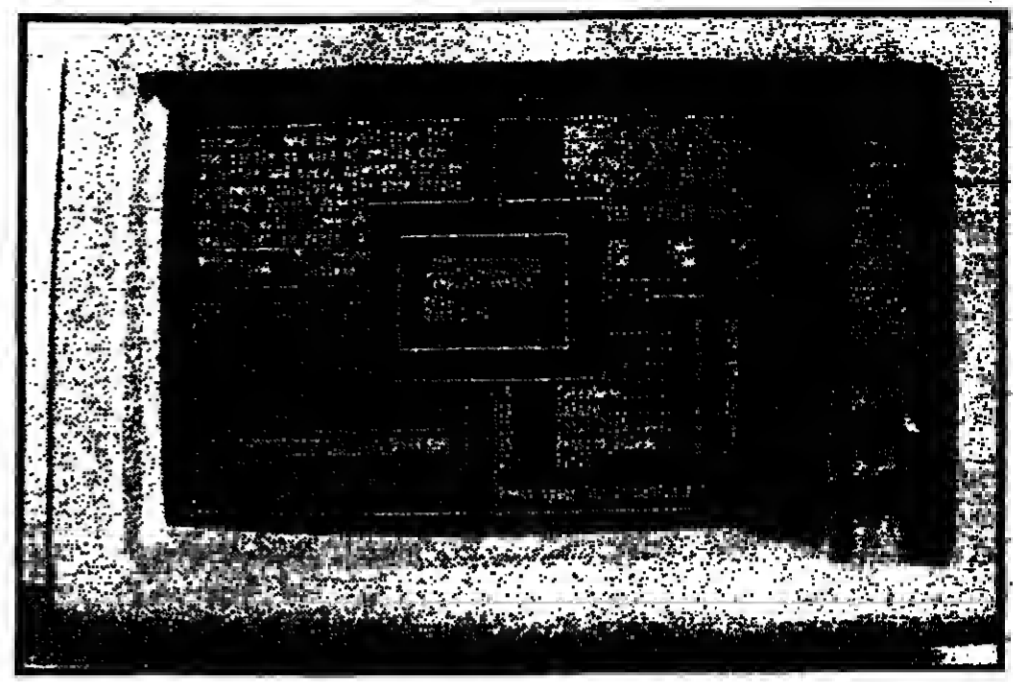
The integrated software package, like everything that has preceded it, will probably be hailed as the ultimate answer to your software dilemmas. However, even Mr Mitchell Kapor, chairman and chief executive of Lotus, has expressed his doubts, speaking at the recent Financial Times Professional PC Conference.

"I don't believe that integration is a panacea. Value for customers is more important than integration. There is no single solution. So far, every generation of computer users has faced the same problem: "conversion" from one system language, or package, to another—even from one release of a product to another.

Passing data from one application to another now looks comparatively easy. The trend in the 80s has been away from "locking in" users to a particular supplier, and towards creating more options, possibly hence Unix, Pick, and the other portable operating environments.

No-one, so far, seems to have found their way around the inevitable equation: as the software becomes more powerful, so the users need to become more skilful, and more versatile.

So, it might be added, do the software marketers. Users sometimes just don't know what's good for them.



Decision Manager—Up to 20 windows or projects can be defined with up to 10 displayed on the screen at any time. The innovative "cut-and-paste" windows give the user full integration of applications being used

Big orders for financial software

STARP Electronics, one of the largest suppliers of consumer and business high-technology products in the UK, has ordered £100,000 worth of software from MSA (Management Science America) comprising the general ledger and accounts payable on-line packages.

Implementation of the software, scheduled for this month, marks the final stages of a two-year switch to IBM hardware and IBM-compatible systems, at Sharp's Manchester head office.

Sharp, which employs 300 staff in the UK, has seen substantial growth and its latest turnover figures exceed £150m. Worldwide, the company operates in 135 countries with a total turnover of more than £3bn.

BP Oil, the refining and marketing arm of the BP group in the UK, has also ordered £100,000 worth of MSA software, comprising the General Ledger and Accounts Payable On-line packages, and the Easy-Screen generator system.

At BP Oil, however, the new software will run on Sperry computers. Mr Christopher Sweeten, says: "As far as I know, there is only one

other such system available commercially and that is priced at more than £100,000."

He added that with the Alpha Micro, "our prices start at one tenth of that cost. Even with four VDUs and three printers, the system costs less than the former minicomputer configuration, with only one VDU, from which IMPRINT was originally transferred and enhanced."

COMPREHENSIVE business systems, turn-key solutions, business applications software and system enhancements will be featured in DEXPO Europe '85—claimed to Europe's major DEC-compatible industry exhibition. The event will be held from March 6-8, 1985, at London's new Olympia 2 complex.

The wide range of business applications that DEC and DEC-compatible systems can fulfil will all be demonstrated at the show. Computers, ranging from single user micro-based systems, through multi-user Super-micros to large networked mini-based systems will be displayed with a full range of applications software. As I know, there is only one

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Solutions are a long time coming

Micro links with mainframes

CLAIRE GOODING

ONCE UPON a time you managed without a micro—in fact, you may even have survived without a calculator.

Now the pressures on any business are such that the way a company manages data can make the difference between success and failure. These days, data management means not merely the mainframe in the department, but the executive workstation (formerly known as a microcomputer), on the desk.

To get the best out of both information tools, there should ideally be a link between the two.

The microcomputer crept in through the back door of corporate computing. Standalone micro appeared on desks almost as an act of defiance to the DP department—"no use asking that lot—they'll take weeks," said the maverick user, "I'll do it myself on the Apple."

True enough, the results came more quickly. But however efficient the system and the user, it generally took a long time to enter all the data for a forecast or a one-off report—data that probably came from a mainframe printout in any case.

A worse problem was that the data held on the mainframe and entered manually on the micro soon diverged. That alone limited the usefulness of the "independent" micro, which could neither share the information available elsewhere, nor benefit anyone else outside its own domain.

Microcomputing became respectable almost overnight when IBM entered the market with its Personal Computer.

There was a rush by the mainframe software suppliers (suddenly assured of a huge audience), to team up with microsoftware houses. The main frame was to take database software from the lofty realms of the mainframe and make it work for the new generation of non-expert users.

It has taken longer than anyone expected to deliver the dream of micro and mainframe working in harmony. End-user computing usually consists of three major tasks: retrieval, manipulation, and maintenance of data. Not all micro-mainframe links cater for all three problems.

Developers chose different routes, or adapted the "downloading" principle to work with their particular database.

As with everything else in computing, there was no single solution.

The micro, in effect, became an intelligent terminal, attached to the mainframe, or connected by a modem for the stay-at-home worker. More difficult to solve was the principle of how much power an end-user should have.

Data integrity

Data processing people spend a lot of energy maintaining "data integrity": the less notorious side of security. They deal with the accuracy and reliability of data, and generally keep things in order.

Not surprisingly they take a proprietorial view of the company's precious data, which is only useful as long as it is correct.

While programmers are often delighted to offload some of their backlog, there are dangers in handing power to end users. Someone in the DP department must act as controller and vigilante.

It may be wonderful for the financial director to tap real live data for experiments with forecasting and salary levels. The experiments, however, must not interfere with the bread-and-butter production programmes such as payroll and accounts receivable.

Another problem is that of giving too much access to too many people. Most products use passwords as a way of barring unauthorised access. Unfortunately, most users cannot be bothered with elaborate time-wasting precautions, and often the password is an easily-guessed pair of initials.

Even if the company's com-

puting resources are treated as a network, attention inevitably centres on the mainframe. The workstations may contribute a great deal in terms of data input, but the information still has to be retrieved centrally.

The mainframe fulfils a great many functions, looking after various peripherals, sharing its time between tasks, and opening and closing files as various users request them. So there is bound to be certain amount of protocol to wade through when the micro becomes a cog in the mainframe's mighty wheel.

Moreover, mainframe databases were not designed with novice users in mind. Making them less hostile to micro users has not been easy.

Nevertheless, the well-known names in mainframe software have all hailed the micro-mainframe partnership as a way of delivering real productivity. Most have an offering of some kind, even if the glossy literature preceded the working software by some months.

"The PC has given us a chance to deliver real productivity," said Mr Vic Morcia, vice-president of international operations in a leading mainframe database firm, Cullinet. "This time it isn't just a cliché."

Most users cut their teeth on spreadsheet applications such as Lotus Development Corporation's 123 or its earlier counterpart Visicalc. Forecasting, modelling and decision support are still the prime targets for micro-mainframe links.

For those applications the "intelligent terminal" approach takes with most needs. The user copies data from the mainframe using the micro-mainframe link. That data is treated like an expendable carbon-copy: the micro user can do whatever he or she likes with it, to reach whatever results are wanted. The "copy" is then jettisoned, or stored locally. None of the changes or the results can be fed back to the mainframe.

Several companies supply such links, including Cullinet, Informatica, Mathematica, and McCormack and Dodge. Some firms—notably those who are late into the database field—have tackled the problem of making two-way conversation between micro and mainframe.

ADR, once known for mainframe utilities, is now offering PC datacom a database and family of applications which works both ways, end looks exactly the same on micro and mainframe hosts. Computer Associates, another late entrant

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Computer Software 9

U.S.-based suppliers dominate the sector

Computer-aided design

GEORGE CHARLISH

IN COMPUTER-AIDED design (CAD), an engineer sitting at a screen and keyboard might use an input device like a light pen or a graphics tablet to pin-point positions on the screen. He then joins them to make lines and so build 2D drawings and 3D representations of objects such as engineering components or electronic circuit boards.

The hardware looks impressive—colour screens, tablets, complex keyboards, big drawing plotters, powerful processors—but the key to its successful use lies in the software.

The software determines how easily and quickly the user can make the system "draw" the shapes he wants and how easily and efficiently he can interact with what is on the screen.

Each year, the cost of "chip" hardware (logic and memory circuits) has decreased in real terms while the cleverness (and cost) of the software has increased. A recent report* from market researchers Frost and Sullivan predicted that the software element of CAD suppliers' revenues, 27 per cent at the moment, will reach 38 per cent by 1987.

Designers are only gradually accepting the more advanced and expensive software, however. The F and S report says that users are adopting surface and solid modelling, for example, for only 2 to 5 per cent of all CAD work.

The figure is small despite promotion by the makers and perhaps reflects the hard-

headed approach of most engineers.

Nevertheless, the use of CAD in general has expanded rapidly since it made its first real impact in the late 1970s—in spite of economic conditions. In 1979 European CAD revenues were about \$100m, for 1983 they are put by F and S at \$570m and in 1987 are likely to reach \$2,500m.

This signifies an annual growth rate of 40 to 50 per cent, whereas the computer and information systems market in general is only set to expand at about 20 per cent a year.

Computer-aided design, manufacturing and engineering (CAD/CAM/CAE) is now dominated by U.S.-based companies.

Computer-aided design and IBM are battling for first place on a world basis but in Europe CV's revenues are put at \$145m and IBM's at \$105m. By 1987 they are expected to be equal at \$450m each. Frost and Sullivan says CV is losing market share in Europe.

Next in order of turnover in Europe are Intergraph (\$40m in 1983), Applicon (\$36m), Calma (\$31m) and Rascal Redac (\$27m). Only the last of these is British-based, although Cambridge Interactive Systems (now part of CV), turned over \$20m.

Turnkey projects

Companies with revenues below \$20m are headed by McAuto and MCS/Imbell (both American) while the main French contender is Matra Datavision. Pafec, Ferranti Infographics and Applied Research of Cambridge are other significant UK suppliers. Kongsberg operates from Norway, Siemens from Germany.

These are all "turnkey" suppliers—that is they provide

fully supported hardware and software solutions to customers' problems. Often this is the only viable solution for users with no computing background. But many of the 60 companies trading in Europe will offer software to run on existing computers, often IBM, DEC, Prime, Hewlett Packard, Apollo or Data General machines.

This might be preferable when existing computers have plenty of spare capacity, where integration with other systems running on the machine is desirable, or where CAD is already in place and software enhancements are envisaged.

But companies must then be competent to choose software and perhaps more hardware, and put it all together.

What kinds of CAD system are available? According to Frost and Sullivan, the largest category of user is mechanical/electrical engineering (\$430m of purchases in 1983), followed by electronic printed board design (\$315m), integrated circuits (\$80m), process plant (\$70m), architecture and civil engineering (\$55m) and mapping (\$40m).

There are two dozen or so mechanical system offerings, including IBM's top-selling Cadam. Computer-aided design (CAD) from Intergraph, Bravo from Applicon, DDM from Calma and Unigraphics from McAuto.

Various levels of sophistication are offered, starting with the production of drawings in plan, front and side elevation, using standard forms that the user can call up from the computer's memory and position on the screen.

The more advanced software allows "wire frame" construction of an object in 3D, by describing all of its vertices and edges using light pen or graphics tablet. (The former is used to "draw" on the face of the display tube, the latter mirrors on the screen whatever is drawn on the tablet area with a special stylus.)

Other programs go a step further and show the surfaces, flat or curved; bounded by the wire frame, while the ultimate in sophistication is the "solid model" (Computer-aided design, for example), where in effect, a colour picture of the object is seen on the screen—"lit" from any angle the user desires.

Once these completely descriptive geometrical databases have been stored, there is soft-

ware—IBM's Catia for example—that will animate completed constructions like engine parts or robots. But such systems consume much processing power and tend to be expensive.

CAM (computer-aided manufacturing) is a development that uses the database to give cutting instructions to machine tools, while CAE (computer-aided engineering) allows the engineer to apply, for example, static or dynamic forces to a structure on the screen to see how it behaves—long before any metal is cut.

For the electronics industry, there are about 50 programs for the design of printed circuit boards—an area in which Britain's Rascal Redac and Micro Quest are well known, although most of the CAD majors offer systems. They allow the

designer to create a schematic circuit diagram, simulate its logic activity, lay out the board and route the interconnections. The computer provides data to photoplotters to yield accurate artwork for production.

Test patterns

Some of the programs will also generate the necessary test patterns for the auto-testers and design the test fixtures.

Similar requirements occur in the design of integrated circuit "chips"—the third largest market in Europe after mechanical and PCB design.

Relatively new companies such as Daisy Systems, Mentor Graphics and Valid have made a considerable impact at a time when electronic systems companies are increasingly design-

ing their own chips.

Process plant designers in the oil and chemical industries can use CAD for large arrangements of pipes, vessels, pumps, valves and similar items which have to be optimally placed in space with no clashes. Programs include PDMS (Prime Computer) Medusa (Computer-aided design), Pega, (Cadcentre), IGDS (Intergraph) and Prodabas (Frosys Technology).

Building design also benefits from CAD. There are about 15 programs which allow the whole project to be assessed before a single brick is laid, from internal and external appearance to the insertion of services such as heating and ventilating.

*Computer Aided Design Systems in Europe: Frost and Sullivan; 329 pp; \$1,775. Phone: 01-486 8377.



A piping engineer in the oil industry uses a Computer-aided design (CAD) system to route piping and place equipment. Alignment and connections can, for example, be quickly checked to ensure interference does not occur in the system.

Indication of a maturing market

Software publishing

PHILIP MANCHESTER

THE LAST couple of years has seen the birth of a new industry. Prior to the introduction of computer software products to the shelves of High Street chains, such as Boots and W. H. Smith, this specialised industry could not have existed. It is called software publishing and, to a certain extent, its birth is an indication of the growing maturity of the mass computer market.

Mr David Ward, chairman of Manchester-based software firm, Ocean Software, describes the software business prior to the entry of High Street stores: "About 18 months ago, most software was distributed by direct mail order. Companies and sometimes the programmers themselves would advertise in the specialist press and hope for a large wad of orders to fall through the letter box. The products were then despatched in jiffy bags to the waiting computer owners."

But the entry of large-scale distributors—first of all with hardware and then later with the software products—has changed all that. Mr Ward estimates that UK

chain stores now sell 75 per cent of the software for the home computer market.

"Perhaps the major factor in the development of that market has been Sinclair's Spectrum computer. For the first time it made it possible to distribute computer programs on cassettes at 'pocket money prices,'" observed Mr Ward. A typical computer game costs around £5.00.

He sees the idea of software publishing coming about as a result of the mass market demand for software.

The needs of a mass market demand greater professionalism in packaging, marketing and distributing the product. "When you are dealing with organisations such as Boots and W. H. Smiths they expect the product to be there when you say it will," noted Mr Ward.

Resources

Ocean Software may spend between £10,000 and £20,000 to bring a new product to market with all of the advertising and packaging, point-of-sale material and special support.

Mr Ward suggests that this sort of operation is beyond the resources of the average small-scale software builder for microcomputers.

He goes on to say that being a computer programmer can actually be a disadvantage. Mr Ward and his colleagues at Ocean all have non-computer

backgrounds, though the company does retain a number of in-house technical people "to keep our finger on the pulse."

Occasionally they will generate a product but, in the main, the products are bought-in or commissioned in much the same way that a manuscript is obtained by a book publisher.

"The industry has become very 'fashion-driven' and the charts for software are becoming as important as the pop record charts," commented Mr Ward.

A typical product packaging exercise entails taking a rough idea by an author and "smartening" it up. This would include introducing high quality graphics and good documentation.

"We also rewrite product from one computer to another. A game that has been successful in, say, the Spectrum charts is almost guaranteed success in the Commodore charts. We do a lot of translating games from one machine to another," he added.

Melbourne House, another software publisher, has a background in book publishing and almost fell into the software market by chance.

"We published a book on the Sinclair ZX 80 computer and it was an enormous success. Our managing director decided to drop everything and move into software publishing," said Christine Lougharne of Melbourne House.

"We have quite a large team of in-house programmers which makes us different from a book publisher—they don't employ authors," she went on.

Melbourne House tends toward producing its own products but it does take outside authors' software. "The problem is that an author can go to several companies and auction a product off to the highest bidder," she added.

Team operation

"I think we will be tending to generate our own products more and more as the trend is toward working in teams. The most successful Melbourne House game has been The Hobbit and that took a team of people 18 months to write."

The computer games subsidiary of the Virgin empire, Virgin Games, falls between Ocean and Melbourne House with about half of its products "coming in through the door" and the other half written by employees.

"We are keen to let programmers know that we would be interested in marketing their work," Mr Nick Alexander, head of Virgin Games.

"But we need the internal staff to dress the products up for the market." Mr Alexander described a typical example of using an external author: "We had a relationship with the author of

one of our most successful products, Falcon Patrol—Steve Lee. He came to us with another program about which we were only moderately interested, but he had mapped out the ideas for Falcon Patrol for us. We did a deal with him on the program he had finished, mainly so that the could put Falcon Patrol together for us."

Mr Alexander describes the relationship between Lee and Virgin as similar to that of record company and an artist.

"What does not exist at the moment in the market is the equivalent of a literary agent who would work with an author to package a product up. This means the software publishers are fulfilling that role."

Other software industry people have compared software product publishing to film production, although one of the obvious metaphors really apply, especially with the new developments currently taking place in networking. As yet, the distribution of software over telephone lines is in its early stages.

But with the considerable freedom such a distribution method offers, it is only a matter of time before this becomes, perhaps, the dominant form.

Such a development will probably be as traumatic for the software publishing industry as the transition from mail order to retail distribution.

Revenues from European sales

Computer-aided design (CAD): figures in \$m	1983	1984	1985	1986	1987
Application	110	150	218	290	370
Electronics, PCB design	52	80	127	184	280
Electronics, IC design	295	430	635	880	1,200
Mechanical and electrical	28	55	77	106	140
Architecture and civil engineering	45	70	104	142	190
Process plant design	27	40	64	95	140
Mapping and utilities	570	825	1,225	1,700	2,300
Totals					

Sources: Frost and Sullivan forecasts.

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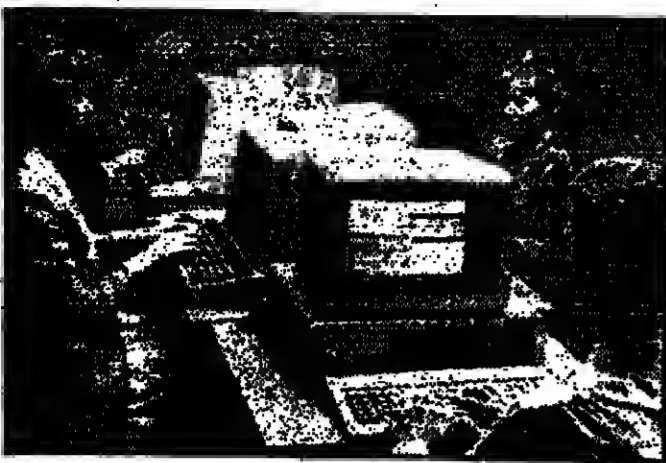
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Startlink from Digital Research creates five workstations (above) from one IBM Personal Computer so that several people can share files, software and data simultaneously and cost-effectively.

A boost for the tourist industry

Leisure sectors
RAYMOND SNODDY

THE COMPUTERISATION of the English holiday resort is scheduled to take a dramatic step forward today.

Five English resorts—Bournemouth, Brighton, Hastings, Scarborough and Torbay—have got together for a computer booking pilot scheme. For the first time it may become as easy to book a holiday in Bournemouth as it has been for years to book in Benliden.

Travel agents throughout the country will be able to make instant confirmed bookings for seven and two night holidays in each resort through a computerised viewdata system.

What is hoped will give the English seaside resort a more competitive edge is made possible by a computer reservation system called Rita (Reservation Information Tourist Accommodation) which has been developed by Datasolve, the Thorn EMI information technology subsidiary. The development has been supported by the Department of Trade and Industry, the English Tourist Board and the British Resorts Association.

In the project each of the 119 hotels taking part allocates a portion of its rooms to the Rita system. Rita (Reservation Information Tourist Accommodation) can be instantaneous. Rita keeps track of all bookings made and automatically maintains an up-to-date picture of availability of rooms.

The agent can also specify to Rita what type of accommodation is required together with the price range and dates.

Rita will search for particular specifications for those wanting to know which hotels take dogs or have four-poster beds.

Although Rita is making its debut at only five resorts in the depths of winter it is an important step forward. The hope of both the DTI and UK travel industry is that the system will gradually be taken into a national data base of both information on both holiday resorts and available accommodation.

The English Tourist Board (ETB) hopes that Rita, which is based on a Prestel/Gateway computer system, will give travel agents a better opportunity to tap a market for holidays and short breaks at independent hotels which the Board believes is worth £2.8bn a year.

Big step

Mr Michael Montague, until recently chairman of the ETB, said earlier in the autumn when announcing the new system: "In introducing Rita I believe that English tourism is taking a huge step forward. At last there will be a fast, cheap and easy way to choose and book a full range of seaside holidays at these five resorts."

The importance of the Rita system and the welcome being given to it in the travel industry merely underlines the extent to which whole sections of the leisure industry are dependent on sophisticated software.

To a very considerable extent the modern efficient world of mass package holiday travel would not have been possible without computers to keep track of bookings and vacancies.

In travel agents the viewdata screen is becoming almost ubiquitous as the telephone and hotels are heading in the same direction.

● In aviation there are systems such as the British Airways Travicom which gives access for air travel bookings to airlines all over the world.

● The Association of British Travel Agents was instrumental in developing computer systems which offered instant access to tour companies and reservations via viewdata.

● In hotels, computerised booking and management systems are gradually taking over from

their manual predecessors and new technology, which started out in the largest luxury hotels is now, thanks to the micro-computer, penetrating hotels with fewer than 50 beds.

British systems such as Champs—now owned by Software Sciences—is in use in more than 35 hotels in many parts of the world. Earlier this year the Champs system was installed in two hotels in China—in the 560-bed Great Wall Hotel in Canton and the 2,150-room Lido Hotel at Peking Airport.

As in other fields of software, there is considerable evidence that British software in the travel industry is well up in the international league and there should be good prospects for increased exports in future.

Computer systems were introduced into hotels as early as the mid 1960s. There was one at the Strand Palace Hotel in 1967. The number of functions covered has increased as the cost of the hardware has fallen.

Software Sciences says its Champs system handles most of an hotel's activities including restaurant point of sale, direct guest billing, reservation, marketing statistics, guest histories and general accounting.

Hotel system

Software Science has recently introduced a hotel management system for the smaller hotel on a desk top Data General computer, which costs something in the region of £35,000-£40,000. Its functions include the automatic carrying out of credit ratings as the guest checks in.

Mr David Levy, marketing development director of Champs believes that within two years between 60-70 per cent of hotels in the UK with more than 50 beds will be computerised and 20-25 per cent of those with less than 50 beds. Turnover has risen dramatically to more than £1.5m this year and the company is actively pursuing plans to try to break into the U.S. market where there are believed to be more than 70 different hotel computer systems in operation.

Although the company has not won any contracts in the U.S. yet Mr Levy says: "We have never found ourselves out of our depth. We certainly plan to move into the American market."

The growth in the holiday software market has also meant an opportunity for companies running computer bureaux. Baric, the ICI subsidiary has offered an on-line reservation service using viewdata for the past two years.

Baric says 10 tour operators including Global uses the system. The most recent resort to the Holidaymaster system is a motoring holiday subsidiary of the Automobile Association.

The main advantage of using computer service companies such as Baric is the lower investment compared with setting up a stand-alone operation. Apart from initial setting up charges Baric charges its tour operators about £2 for each holiday actually booked.

Thomson Holidays decided to go their own way using the possibilities that Prestel had opened up. The company started using computers for administrative purposes in the late 1960s and introduced its first real-time reservations system in 1978—TRACS (Thomson's Reservation and Administrative Control System).

In 1982 Thomson's introduced its new national system, TOP—Thomson Open-Line Programme.

According to Mr Colin Palmer, Thomson's director, TOP has transformed the company's relationship with its travel agents. Now when the agent makes a booking through TOP the transaction is binding as soon as it is confirmed on the videotex screen.

Around 5,000 travel agents are linked to the system and Thomson gets 70 per cent of its business that way.

Instant tickets for package holidays are, however, probably still a couple of years away, Mr Palmer believes.

Rapid changes in technology and financial software requirements bring strong pressures on system suppliers

Suppliers cannot rest on their laurels

THE NEWS late last month that FTS, a member of the Link consortium of financial institutions had given Logica and Olivetti the contract for its automated teller machine sharing network illustrates many of the key features of the financial software business today.

First, the consortium itself. FTS is a company within the Link consortium which includes building societies, financial institutions and savings banks—a good cross section of the "non-banks" which are expected to make a technological splash in the banking world.

Second, Olivetti, the hardware supplier. It will be providing the central switches for the system based on its CPS/32 fault tolerant computers.

The CPS/32 machines are, in fact, built by Stratus, a comparatively new U.S. company which creates fault tolerance in the computer hardware by pairing off sets of very powerful microprocessor chips and comparing the results from each set of pairs.

The FTS-grader is important both to Olivetti and to Stratus as they try to break into the fault tolerant banking market, dominated by Tandem, the original non-stop computer maker.

Then there is Logica. A leading, publicly listed UK computer services company, it has carried out a number of major banking projects including CHAPS, the clearing banks automated payments system. The software it is offering

Banking and finance ALAN CANE

Link-On/3-is not its own, however, but written by a Dallas based software house Shared Financial Systems (SFS). Logica has been offering On/2 for only a few weeks in the UK; the market leader in shared ATM software is Applied Communications Incorporated (ACI) with a switching package called Base 24.

Lastly, the actual automated teller machine (ATM) that FTS is recommending to its members is the Diebold 912, marketed in the UK by Phillips Diebold, the market leader for ATMs in the U.S., but has a comparatively small share of

the U.S. market, dominated by NCR.

The lessons that can be drawn from the FTS order are these:

● First, no supplier can afford to rest on its laurels when the technology is changing so rapidly. Tandem and ACI were undisputed leaders in their particular fields and still are; but Stratus and SFS are going to prove strong challengers with what appears to be newer technology.

● Second, customers are beginning to appreciate the importance of an integrated package of hardware and software. The CPS/32 and On/2 proved to be a combination that the consortium could not resist.

● Third, the kind of customer who wants financial software today is likely to be quite different from the customer of 10 years ago. What is more, computing companies which have long experience in some aspects of financial software may have to buy in new experience from outside to stay in contention.

ATM-sharing is very new to the UK, and only a few years old in the U.S. Logica, despite its expertise in computer communications, did not have its own ATM-sharing package and so sought a suitable system abroad.

The hardware side of the electronic money business has settled down. For large systems the banks and others will use IBM, Tandem and, increasingly, Stratus. For workstations, they will use IBM Personal Computers (PC) or machines which behave like PCs. The quality of the software will make the difference.

So yet another trend is towards a multiplicity of suppliers. Some years ago, banking systems were built by the banks' own data processing staff helped and guided by the major software houses. CAP and Logica both grew powerfully on this kind of bespoke business, which created the substantial batch-processing systems which still underlie the banks general accounting activities.

Tough world

Then there was a pause of some years while the banks—and the non-banks gathered themselves for the move to on-line interactive systems, and to the smaller scale distributed systems which could be run on personal computers.

The big bespoke houses apart, banking packages were in the past written by a handful of software houses which had the experience, luck and judgment

to prosper in the tough banking world.

With the move to on-line interactive systems, the flood gates have opened and banking and financial packages are available from a wide range of computer services companies. F International, for example, an unusual software company specialising in freelance programmers has developed a treasury management package.

CAP and Data Logic have both launched integrated dealing room systems while Minoie Business Systems has launched a UK and Foreign Stockbrokers package running under Unix, the high-performance micro-computer operating system, just to give an idea of the spread of companies and products.

The next stage and the greatest challenge to banking software specialists is the integration of banking products and services, to create a coherent whole. Now integration is very much the flavour of the month at present but in a recent report Salomoo Brothers noted: "In view of bank deregulation and the steady incursion of nonbanks we believe it is incumbent on bank managements to increase productivity through strategic, futuristic electronic banking plans."

A final trend is the hurrying

of the distinction between what is financial software and what is not. Treasury workstations, for example, are thought to be incomplete these days without a spreadsheet attached.

The move is towards integrated software like Lotus 1-2-3 and Symphony, but competitors in the financial planning business like David Thorpe of FT Moneywise (which IBM is now selling in some 17 European countries) argue that that kind of integration has proved more cumbersome than valuable. He says what is needed is a dedicated financial modelling tool—the U.S. spreadsheet software houses have come to a dead end.

Decision

But it is certain that decision support will feature more powerfully in financial systems. Mr S. G. F. Dennis of Facter told a recent financial conference that decision support systems could be applied across the whole finance sector where they could be used for both tactical and strategic decision making. "There is nothing essentially new in all these," he said. "All these activities have to be carried out in any case. Decision support systems simply allow them to be carried out faster and better."

Just think what they could have done with Framework™

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formulae behind the spreadsheets providing automatic recalculation.



— While at the same time calling up a graphics frame to analyse competitors' sales profiles before designing the first

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Computer Software 12

Really three markets rolled into one

BY ITS intangible nature computer software is not the easiest product to sell. There are no shiny magic boxes with sleek cabinets, merely the promise of functions and performance to try to persuade businessmen to part often with large sums of money.

But computer software has developed into a major industry in the UK—some forecast it will be a £1bn industry by 1987. And creative marketing strategies have been developed which have taken some software companies from the backroom to the international arena in months, rather than years.

But the software field is really three markets, rather than one—each aimed at different customers and needing different tactics to conquer the marketplace.

At the top end are software houses selling partially customised software to run the affairs of major industrial groups. Here the bill can easily come to over £100,000 and reliability and trust are the issues, rather than the colour of the packaging.

In the middle of the market companies are trying to sell programs which could easily cost £1,000 for use by small companies or by individual businessmen.

At the bottom end of the market software becomes a low cost consumer product for the home computer—a mass market of tight margins and intense competition in the High Street through such microcomputer multiple stores as Boots and W. H. Smith.

Big orders

The price battles of the High Street are a long way from the world of software companies such as MSA (Management Science America) one of the leading software houses at the "heavy" end of the market.

The company claims it is the world's largest independent software supplier with turnover of \$139m in 1983. In recent weeks orders in the UK have included £100,000 software packages for both BP Oil and Sharp Electronics (UK) and an £80,000 deal with British Aerospace Dynamics Group.

To Mr Michael Hunt, MSA's executive vice president for international activities, marketing such software is a very precise task.

Although the company does some specialist advertising, its marketing — because of the

The big sell

RAYMOND SNOODY

nature of a product—tends to be a personal affair. Large potential customers have heard of MSA and put the company on a short list of potential candidates and the task involves trying to convince key decision-makers through presentations.

That was how MSA won its largest contract in local Government, so far—the £110,000 deal to introduce their accounts payable, budget control and general ledger software to the Greater London Council. (The system had its teething problems but, both sides now agree, is working well, just as the Government sets about abolishing the GLC.)

There were three names on the shortlist for the GLC contract. The others were McCormack and Dodge and Package Programs. One GLC observer thought that MSA's was the slickest presentation and that might have made a difference in the final decision.

The company usually said "yes" when asked by GLC financial specialists whether their software could carry out a particular function. The other two seemed to be more cautious.

A sale of such a software package can take between two and six months and involve as many as four systems consultants and support people before the contract is actually signed. The entire process from first contract through implementation and training to the removal of the last bug in the system, can be as long as 18 months.

At this end of the software spectrum marketing is very closely integrated with other aspects of the company.

"The key thing that users tell us is that they want to do business with a stable, growing company and they are very concerned about how much money is being spent on R&D," Mr Hunt said.

Purchasers need to know the system can be updated. MSA know from hard experience that the ability to sell major software systems to IBM mainframe users (their main market) does not automatically confer the skill of selling individual business software.

MSA has tacitly admitted that it is not the right company to run successfully Peachtree Software, its subsidiary in the microcomputer market.

MSA alone, Mr Hunt says, is a profitable company but Peachtree's performance is dragging it into loss. MSA is now looking for purchasers for Peachtree and says there are several interested parties.

A fundamental difference between the top and the middle of the market is the relative amounts spent on R&D and marketing.

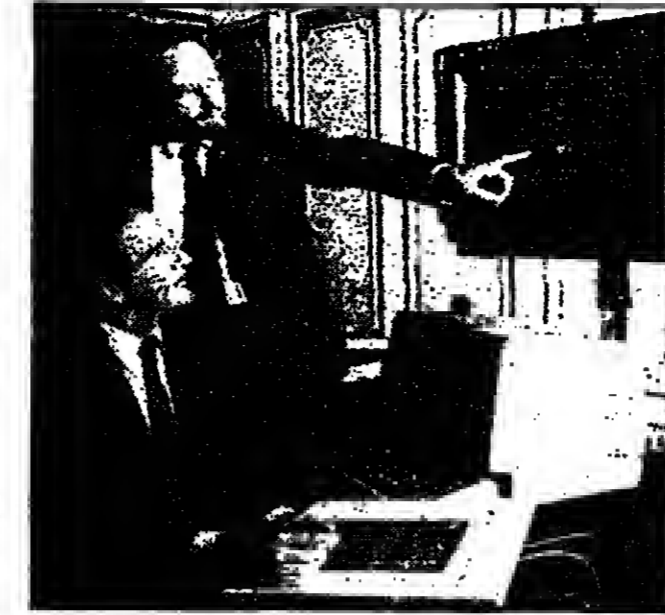
"MSA spends 20 per cent of its turnover on R&D and 2-4 per cent on marketing. With a company like Lotus (which produces software for businessmen), its 20 per cent marketing and 4 per cent R&D" is how Michael Hunt encapsulates the difference.

Prices

Lotus says, in fact, that it spends more than 10 per cent on R and D but accepts the different emphasis because of the nature of its software.

Lotus has grown to a turnover of \$100m since its founding in April, 1982, by producing advanced integrated software packages for personal computers. But at prices of £395 for the 1-2-3 package and £350 for the second Lotus product, Symphony, individual presentations, says Mr Irfan Salim, European marketing manager, are out of the question.

Instead, Lotus (which sells its software through the specialised computer dealers) organises one-day training presentations in various parts of



Graphic demonstration: 15 UK electricity boards have been introduced to a new concept of energy distribution control, using computer graphics.

Above: Mr Ian Bilsland (standing), introduced the concept to former Energy Minister, Lord Avon at a London demonstration. Mr Bilsland is managing director of a small Scottish company, Graphic Information Systems, of Blairgowrie, Perthshire, which has produced what is described as a solution to a network control problem that has so far eluded the world's energy distribution engineers. It uses computer graphics technology to display "active diagrams" of distribution networks that

are interfaced directly to telecontrol devices in the field.

Mr Bilsland explains that the graphics terminal provides, in effect, "a window on a distribution network map that, in the case of even a small electricity board, could extend across 2½ acres if it were laid out, end-to-end."

Graphic Information Systems estimates the particular market for computer graphics systems in electricity distribution networks at £25m in the UK, £160m in Europe and, perhaps, £300m worldwide.

The system is claimed to be equally applicable to any energy network — gas, water, oil and so on.

Earlier this year, W. H. Smith also took a large step into software distribution. It linked up with the largest business software distributor in the U.S., Softeam.

WHs Softeam plan to try to take 25 per cent of the UK market for business software in the next three years.

At the bottom end of the market, particularly with games and other low-cost software, there appears to be the beginning of a move away from using distributors. The Virgin Group and several other companies are planning to take over responsibility for their own distribution.

Cut-price software houses, such as Mastertronic, are evolving distributors and selling direct to a wide range of retail outlets.

No single 'package' will fit all bills

LOCAL AUTHORITIES, like banks and accounting firms, are sophisticated computer users and have been for years.

The very nature of their statutory responsibilities, dealing as they do with people, money and places, makes them a natural candidate for automation. That very diversity of activities means that an equally rich variety of computer software must be available to meet their needs.

And in this respect, Britain's local authorities are a paradigm of the typical modern computer user. The range of activities they are involved in is broadly similar across the country.

They all have to pay their staffs, account for the £33m or so local authorities in England spend each year on goods and services, control their housing stocks. Yet each council has its own refinements of operation which make it difficult for a "standard" computer package to fit all bills.

And there is the additional burden of changes in legislation which must be complied with by set dates, throwing a substantial extra burden on the data-processing staff.

This problem is rarely appreciated or treated sympathetically by those outside the data centre, but it has become the data-processing manager's chief concern these days.

Well over 50 per cent of staff time in most data centres is spent on maintaining and modifying existing programs which explains why requests for new applications may not be met for several months.

This, together with the decline in real terms in the cost of computing hardware, is the reason for one of the principal trends in local authority computing today, the distribution of computing power rather than its concentration at the centre.

In the past, local councils were usually dependent on their county council data centre for processing power — now they can afford to install their own small machine.

This trend is also noticeable within the larger councils— in the past all departments would depend on the data-processing department for their computing; now individual departments, housing, say, or rates are installing their own machines, often

ICL Mc28s, to run their own applications.

According to a regular survey carried out by the consultancy Urwick and Computing newspaper, "the public administration sector, mostly covered by ICL, is the user sector with the biggest boost planned for decentralisation, while public utilities are the most cautious."

Manufacturers such as ICL say that the quality of software they can offer is now critical in competitive tendering; hardware is almost taken for granted.

The local authority sector in the UK is unusual in the way it depends on its hardware manufacturer for software. ICL is the dominant force — the authority computing with some 58 per cent of the hardware market with IBM in second place with 23 per cent.

Local authorities

ALAN CAINE

Honeywell and Sperry have very much smaller shares while in the smaller local authorities, the minicomputer manufacturer, Microdata, has built up a substantial customer base.

Like almost every other kind of business that faces the big banks and the Stock Exchange are good examples—the local authorities would like to see full integration for their "ideal" system.

In other words, all the information "belonging" to the authority would be held on a single central database which would be available to users in all the authority's departments where it could be manipulated by specific applications programs.

There have been attempts to build such systems, but none has been really successful. Perhaps the best-known attempt was ICL's Local Authority Management Information System (LAMIS), parts of which are still used by some of ICL's local authority customers.

The problem was, an ICL spokesman explained, that the work involved in loading the database proved insupportable. Now its approach is to build discrete programs for particular applications—finance, housing, rates and so on—hoping to create links between them at a later date. So far, no local authority has progressed very far with this "data sharing" approach.

ICL's star performer, in London at any rate, is Islington which runs a number of ICL local authority packages including LAFIS (Ledger Accounting Financial Information System) and HMS (Housing Management Information System) on its twin 2888s.

Manufacturers' systems and those from independent software houses have not always proved acceptable to local authorities and Camden decided to design and write its own housing benefits system from scratch. Now it has been installed in eight other local authorities.

Perhaps the most important development in recent years, however, has been the appearance of local authority software country-wide consortia (some years ago some of the London boroughs set up a similar scheme but only one system came out of it).

The Chartered Institute of Public Finance and Accountancy has played a key part here. Mr Rod Aldridge, managing director of its computing services subsidiary, explains that the institute linked together some 154 authorities to sponsor jointly the development of software to handle computerisation of the authorities' direct labour force activities.

This was forced on the authorities by the new local government legislation in 1980; there is certainly a belief that new legislation now going through was drafted with the computer in mind.

The complex calculation and formulae built in can only be handled efficiently by computers.

Mr Aldridge's direct labour package was written by CMC and ICL and both packages are being used by more than 100 authorities. The CMC version with CIPFA's "seal of approval."

Was Keynes a genius, or did he have Multiplan?

A few years ago, a certain John Maynard gained a reputation for his radical monetarist theories.

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